NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES. Boston, April, 1868. VOL. II.---NO. 4.

R. P. EATON & CO., PUBLISHERS, OFFICE, 34 MERCHANTS' ROW. MONTHLY. SIMON BROWN, S. FLETCHER, } EDITORS.

APRIL.

"Candidus auratis aperit cum cornibus annum Taurus."—VIRGIL.

The white Bull opens the year with his golden horns.

LET a boy take an orange, and thrust a wire through it from stem to calyx. Let one end of the wire point to the north, and the other to the South. Draw a line round the centre at right angles with the wire, and set it spinning round from west to east. The orange now represents the earth revolving on its axis, and the line, the equator. Let the light of a candle fall upon it, so that the rays shall fall directly upon the line. The sun is now over the equator, and the days and nights are equal. We will call it the vernal equinox, which occurs about the 20th of March. Now tilt up the northern end of the wire gradually, until the direct rays fall 23½ degrees north of the equator. Here make another line around the orange. This is the tropic of Cancer, and indicates the distance from the equator, at which the direct rays of the sun fall upon the northern half of the earth's surface about the 20th of June, the longest days of the year.

Now begin to turn down the northern end of the wire, and about the 20th of September you will get the earth into the same position it occupied when you began the experiment. This we will call the autumnal equinox. Keep on gradually turning it down, and about the 20th of December, the direct rays of the sun will reach 23½ degrees south of the equator. Here draw another line around the orange. This will represent the tropic of Capricorn. Now the days are shortest in the northern half of the earth, and longest in the southern.

Now begin to tilt down the northern end, and upon the 20th of March, you will get it again into a horizontal position. Remember that the orange is to be kept spinning round on its axis all the while that you are tilting it up and down. These motions of the orange will give us a tolerably correct idea of the movements of the earth in relation to the sun, and the cause of the difference in the temperature, and in the length of the days, at different seasons of the year.

On the 20th of March, the earth's axis was horizontal. The northern end of it is now

being tilted up at the rate of 23½ degrees in three months; or, any given place on the northern hemisphere is approaching the sun at the rate of 470 miles a month, or about as fast as an ordinary man would walk. We shall soon be in a warmer climate. Taurus will be the reigning sign in the Zodiac, and the earth will open her bosom to the genial warmth of the sun, the buds will swell, and flowers will begin to open, the leaves will unfold, and all nature will spring into life and beauty.

But climate does not depend entirely upon latitude. It is influenced by various local causes. The latitude of Rome, the home of Virgil, is not very different from that of Boston. The warm waters of the Mediterranean, and the warm south winds from the arid sands of Africa, make the season at least a month earlier than ours. The month of April in that part of Italy, is more like our May, in which we may more properly speak of the opening year. The "Aprici dies," or sunny days of Virgil, are rare in this climate, in April, where the east winds, blowing over the icebergs of the Atlantic, take the place of the African winds on the shores of Italy. But the life-giving influences of the sun will be felt in due time, and all nature will rejoice.

APRIL HAS COME.

"April has come, and in the silent wood
The light rain patters, as if fairy feet
Upon the crisp leaves gambolled. There's a scent
Of blowing flowers on the soft south air,
* * * while along the rills
The grass springs green and balmy, and the earth
Is fragrant with a thousand springing seeds."

Mrs. B. H. Thomas.

APRIL has come. Welcome, April, after the long and severe winter which has kept us ice-bound and snow-bound for three long months. All the more welcome will April be for this, with its showers and flowers, its singing birds and fitful skies. All the more heartily will the farmer enter upon his spring work, and the flower-folk get into the garden to see how things prosper there.

The old adage, "Take Time by the forelock," is worth remembering, as we enter again upon the new life of spring. We suppose it means that we shall take hold at once, promptly and efficiently, of whatever work we have to perform. To plow, to dress the land, and to sow in season, so that crops may have the influence of sun and rain at the proper time, requires as much skill as for the merchant to introduce his goods to the world just at the moment when they are most needed and there is a demand for them.

Certain crops, as the grains, demand April and May influences, and must have them, or they will be unprofitable crops. You may give them July and August, and add to them all the resources of your skill, and still they will languish. April and May were their birth-months and their growth-months, and they never will flourish without them.

Without, then, enumerating the important duties which devolve upon the farmer and gardener in *April*, it is enough for us to call attention to them, and urge that no one of them be left to be taken care of by the laggard's motto: "there is time enough yet;" but that every thing be done seasonably and well, and then *peace* and *prosperity* will preside over the house, garden and fields.

WHEAT CULTURE IN MAINE.

The *Maine Farmer* publishes a circular of S. L. Goodale, secretary of the State Board of Agriculture, announcing the vote of the Board, "That the several Agricultural Societies receiving bounty from the State be, and they are hereby directed, to offer in premiums for the encouragement of wheat culture, during the current year, a sum not less than one-fourth of the amount of bounty so received during the year." The secretary says, there is good reason for the belief that, even now, the average production per acre of wheat in Maine, over the limited breadth sown is greater than the average product per acre in the Western grain-growing States, and no doubt exists that, with improved culture, more judicious rotations, better manuring, and under-draining of such lands as suffer from a retentive subsoil, the acreage product can be greatly increased. The most successful method of culture in that State is stated to be—to prepare the land thoroughly in the fall by ploughing and manuring; and to follow this with seeding at the earliest opportunity in the spring—when the land is first out for a little depth. The ravages of the wheat midge or fly, which for a term of years were terribly destructive, have been much less harmful for some years past, and there are reasons to hope they may not again become a serious hindrance to the cultivation of wheat in that State.

SAND IN THE BARN CELLAR.

The practice has become somewhat common of carting large quantities of sand into the barn cellar and mixing it from time to time with the droppings of the cattle. It is a practice involving the outlay of a great deal of labor of both man and beast, and consequently of much expense. This is done under the supposition that the sand *absorbs* the liquids and saves them.

So far as the sand keeps the liquids from running away, it is well to use it, whether it absorbs them or only prevents their escape by being in their way. Sand has little or no absorbing power, and only acts in this case by being in the way of the liquids.

In the absence, then, of peat, the use of sand is economical just as far as it prevents the liquids from escaping. Beyond that, it seems to us to be lost labor to cart in and out again any quantity of sand. It adds nothing of value to the manure, or, if anything, in scarcely an appreciable degree, while every cord of it that is handled over two or three times must cost from one to three dollars, according to the distance which it is conveyed and the wages paid.

The presence of sand in the manure heap acts as a divider, and in this way may be of some service; but it would be slight. At any rate, the same amount of labor expended in adding good peat to the manure heap, or charcoal dust, or almost any fine, dry vegetable matter, would probably be ten times as useful.

For the New England Farmer.

MAPLE SUGAR MAKING.

I am an old maple sugar maker, and have made as good an article as was ever sold in any market. I have also expended much thought, time and money in making experiments, and have looked the world of agricultural literature over for information on the subject without ever having got a suggestion worth a pin to me as a practical man.

Your correspondent, Mr. Field, says the rough bark should never be hewn off the tree and I can most cordially endorse, with abundant reasons, the assertion; but when he recommends boring through the white wood, I am reminded of the man who killed his goose that laid the golden egg. No tree should be bored more than one-half an inch in depth, and no more than one hole may be bored in the same tree, if the perpetuity of the orchard is desired. We have used the cast iron, the wrought iron, the sheet iron, the sumach, and in short every kind of spout ever used, except the Livermore Patent Spout, and we very much prefer the Willard's Franklin Spout, (that advertised in the FARMER by Mr. Proper.) To discuss the reasons for our preference would occupy more space than you would be willing to afford us, and we can only say that Messrs. Orange Judd & Co., of New York will publish during this year a work in which every process in maple sugar making is fully considered, and every conclusion reached is fully sustained by evidence. There are certain principles underlying the whole subject, of which the mass of practical men are entirely ignorant.

Your correspondent "A. B," of Essex, Vt. wants to know "what's the matter" that his sugar is waxy and black. There is nothing plainer, when you once "see it." All sugar solutions, dense or dilute, when exposed to light, heat and air, undergo decomposition or what is technically called degradation, or to express it in more common, though not strictly correct language "they begin to turn sour." Agitation either by boiling or otherwise accelerates the action, and the presence of foreign matter also helps it along.

Degradation is also contagious, and one particle of degraded matter acts like leaven in the mass. Now "A. B.'s" old buckets are full of the leaven, and it is a physical impossibility to get it out by scalding or otherwise. Then again, it makes all the difference in the world whether he fills up his pan and keeps a pan full of sap boiling hour after hour, or only puts in just enough to cover the bottom of his pan and keeps filling in as he reduces the amount by evaporation. Could fresh drawn maple sap be instantaneously relieved of the water contained in it, the product would be pure cane sugar, as pure as any loaf sugar; but that being a physical impossibility, all maple sugar is composed of cane sugar and this degraded article, which is known to chemists as grape or uncrystallizable sugar, and which is but two-fifths as sweet as the cane sugar, and which constitututes the greater part of "A. B.'s" waxy sugar. If the excess of grape sugar is great, the mass should not be cooked too hard; as the uncrystallizable part dries on to the other and prevents either precipitation or purgation.

As regards the distance from the ground at which trees should be tapped, there is some difference of opinion. I am inclined to believe that the tree does not dry up quite so early low down, and that is all the difference, and it does not amount to anything. The only difference between lowland and highland sap is that the former is sometimes more dilute, and, requiring longer boiling, is subjected to a little more of the degrading influence. Sap almost invariably deposits a small amount of the carbonate of lime in the form of a hard scale on the kettle in which it is boiled. It has, however, no injurious effect unless per-

mitted to accumulate in quantity, when it has a tendency to discolor and perhaps burn the sugar.

I regret that want of space compels me to so cursory a view of this subject, but I suppose I must stop or the printer will bar me out entirely. O. S. Bliss.

Georgia, Vt., Feb. 29, 1868.

EXTRACTS AND REPLIES.

COOKING CATTLE AND SWINE FEED.

In the Weekly Farmer of December 7th, under the heading "Cooking Cattle Feed," are some statements made at a meeting of the "Royal Agricultural Society of England," in which I was much interested. It seems that our British brethren use the English language somewhat differently from ourselves. To say "chaff" for cut straw, "cake" for oil cake, "Sweeds" for Swedish turnips, "pulping roots" for mashing them, "malt combs" for, I know not what, &c., must, I think, sound rather strange to many American ears. What Mr. Laws intended to prove by saying that one of the animals with which he experimented was "white, with a black nose," I do not know. Some of the statements made at this meeting I do not fully understand; still I think it very evident that they militate very strongly against cooking or fermenting food for any kind of animals, especially those that chew the cud. In this I think they are right.

So far as my experience goes, pork from hogs kept on uncooked and unfermented food is far superior to that from hogs kept on cooked and fermented food. If I could get no pork but this, I should, so far as eating pork is concerned, turn Jew at once. I have frequently bought pork; but have much more frequently obtained bad than good. I do not indeed know how it had been fed, but in most cases, I suppose, with cooked or fermented food; as this is the most common practice. I have, on the other hand, frequently eaten pork which I knew for a certainty had been fed wholly with uncooked and unfermented food, and always found it good. Cooked food is apt to be given too hot; and fermented food is apt to be fermented too much. It may be said that these evils might be avoided. Theoretically they might; practically they never will be. The world always has contained careless people, and doubtless always will.

Derry, N. H., Feb., 1868. E. D.

Remarks.—The dust or substance that separates from malt in the process of drying or during its preparation, is sometimes called "malt combs" and at others malt-dust, and is used both as a spring top-dressing of grass land and a feed for cows and pigs. The question of color, particularly that of white, has been consideraby discussed both among European and American cattle breeders, and many have a prejudice against white. Prof. Agassiz introduced the subject at a late meeting of the Massachusetts Agricultural Society. He said white rabbits had uniformly weak eyes. He supposed the white color resulted from a bleaching of those darker tints which are connected with the qualities of the blood, and therefore indicated a certain feebleness of the system. A butcher of thirty-six years' experience in the business was cited who was very strongly prejudiced against white cattle, and said they never dressed well. It was also stated that tumors near the roots of the tail of a white horse are common, and that white horses were subject to a disease known as "melanosis," which seldom or ever attacked a black, bay or red horse. With a knowledge of these facts and theories, it is not at all strange that Mr. Laws should allude to the peculiar color of his peculiarly strange acting steer.

BUNCH ON A STEER'S JAW.

I have one pair of steers that are nicely matched. One has a bunch growing on his under jaw about as big as a hen's egg. I first noticed it only about a week ago. It is soft, and appears to be growing fast. How can I get rid of it with safety? Will it be safe to cut it out? D. W.

Hartland, Me., Feb. 25, 1868.

Remarks.—Bunches upon the jaws of animals are so various in character, and are the result of so widely differing causes that it is unsafe to advise what to do without an examination of each individual case. We understand that these swellings upon the jaws of cattle are sometimes produced, as on the human face, by a decayed, broken or disordered tooth; sometimes they are fibrous tumors or a kind of wart under the skin, but not connected with the bone; and often they result from an internal disease in the bone, or from some external injury to it. It is an old adage, that to know the disease is half the cure. If, in this case, the bunch is caused by a bad tooth, it should be extracted; if it is what the books call an encysted [in a sack] tumor or wart, it can readily be removed by cutting down upon it and taking out the cyst or sack; if it is the result of a blow or other external injury, bathing in cold or warm water may be beneficial; if it is caused by a disease in the bone, a surgical operation, to which we alluded in the Farmer of Feb. 29, may be advisable. It would be well, we think, if all country physicians would qualify themselves to advise and assist in diseases of animals.

BEANS FOR SHEEP.

I have a quantity of poor beans. Are they good to feed to sheep? A neighbor says they will make the ewes lose their lambs. Is it so? A. S.

Tunbridge, Vt., Feb. 25, 1868.

Remarks.—Similar inquiries were made of us a few years ago in relation to oats. We then replied that oats, corn, beans or any other food in which nutritive matter was highly concentrated was liable to injure sheep or any other animal if injudiciously fed. Even cold water, if drank injudiciously, may injure or kill a thirsty man. According to the chemists, there is a little over one pound of nitrogen in 100 pounds of hay, and in 100 pounds of beans nearly four pounds of nitrogen. According to a table in Randall's Sheep Husbandry, the theoretical nutritive value of 23 pounds of beans is equal to 318 pounds of carrots, or 70 pounds of Indian corn; while from the practical experiments of one man in Europe, the value of 54 pounds of beans appeared to be equal to 250 pounds of carrots, or 52 pounds of Indian corn.

But we believe that farmers generally find that sheep are more liable to become "cloyed," or over fed on beans, than on almost any other grain, and that great caution is therefore necessary in feeding beans to sheep, especially at the commencement, as they eat them with great avidity. It is well to mix them with more bulky food,—shorts, oats, buckwheat, &c. But, properly fed, beans are *the* food for sheep, both for fattening and for the growth of wool: and if they are often injurious to breeding ewes that fact ought to be known.

MORE ABOUT TAPPING AND SPOUTS.

Though your correspondent, Mr. Field, discards metalic spouts, they are in common use in this section, and if you find any *better* sugar than is made in Brookfield, I would like to share with you in a good feast. Another correspondent, L. M. Hunt, says that tapping trees in a circle will girdle the tree in time. Undoubtedly correct. But let us take a tree one foot in diameter, and allow an inch of boring each year, and you girdle the tree in about thirty-six years, provided it did not increase at all in circumference. But in that time the tree may become two feet in diameter. In that case you may go round again. Then take a tree two feet in diameter and put two tubs to a tree and two spouts to a tub, and you girdle the tree in about eighteen years; but in that time it will not have half doubled its diameter. Now sir, I think we are becoming a set of robbers, in one sense. We are taking all we can get, and return nothing; and if we go on half a century longer in this unrighteous manner, we shall find our ship wrecked on the shoals of want of maple sugar. I say, give me a pod bit, say two inches long, three-fourth by three eighths inch, with spout of sheet iron, with one end ground sharp; pare off the rough bark and bore one inch deep; then drive in the spout below the hole—careful not to drive into the wood; then drive the nail with head on one side only, just above the hole and hang on the pail. When necessary, I would go round with my bit and rim out as I thought best. V. BAKER.

Brookfield, Vt., March 2, 1868.

TO PREVENT DARK AND WAXY SUGAR.

One of your correspondents, "A. B." wishes to know why he makes "dark and waxy sugar." One great reason I suspect is, he does not keep his tubs and other fixings clean, for the sap is alike free from impurity in all trees. I have an orchard on ground such as he describes, and another four hundred feet higher; and with the same care the sugar is of the same quality. I have tubs older than he speaks of, yet I had orders last season for this spring's sugar. My practice is to scald and scour the tubs both before and after using. The barrels too, should be scalded and cleaned. This last may be done by putting a chain inside and shaking the barrel well. Care should be taken that smoke does not come above the sap. It is my habit to strain the sap through flannel as it is gathered, and it should be boiled down as soon as possible. Cleansing the syrup, when boiled down, is another important item in making good sugar.

Sunderland, Mass., March 3, 1868. Z. M. H.

AMOUNT OF SEED FOR POTATOES.—WHEAT RAISING.

Last season I experimented a little on the amount of seed to be put in the hill for potatoes, and found that potatoes cut two eyes to a piece and two pieces in the hill, gave as much by measure, as where planted a whole potato in the hill, while the whole potato for seed, gave a third more in number,—there being many small ones. This held good with five different varieties on ordinary soil, alike as to quality.

I think that if the farmers of New England would exert themselves to raise their own wheat, we should soon see flour quotations down to living prices; or even if they would do as well in this line as the farmers have done in a small school district in this vicinity, who raised nearly three hundred bushels, or about enough to supply the wants of the district. A.

Washington County, Vt., 1868.

RED WATER IN CATTLE.

Give the animal, in common cases, one tablespoonful of copperas and two of saltpetre, and in severe cases, double the dose, giving it from three to five days, once a day, in the morning; then wait a few days and if the disease is not entirely cured, repeat the doses. I once cured an ox by four doses, that had been troubled for over a year.

Brookfield, Vt., Feb., 1868. L. W. B.

REMARKS.—Prof. Gamgee of the Edinburgh Veterinary College calls this a "disease essentially attacking the poor man's cow," and says it is often checked by a change and improvement of diet. Mr. Flint recommends as a purgative one pound of Epsom salts, half an ounce of ginger, and half an ounce of carbonate of ammonia. Pour a quart of water on the salts and ginger, stir thoroughly, and, when cold, add the ammonia. Repeat, if necessary, once in six or eight hours till it succeeds.

A SICK OX.

Several years ago I had an ox that showed similar symptoms to those described by a correspondent in FARMER of Jan. 25. While examining his head I looked into his nostrils, and saw something so far up that I could not reach it with my hand, but with the help of pincers I got hold of it, and with considerable difficulty I drew out a branch of a tree, covered with small twigs, and over one foot in length. How long it had been there I know not. The ox must have got it in his head while in the pasture, probably feeding where I had previously cut wood. The stick went up butt first, so that it was impossible for the ox to get it out without help. The stick was all covered with pus or matter. Immediately after it was extracted the ox got well. HIRAM FRENCH.

Eaton, Compton Co., Province of Quebec, Feb. 4, 1868.

HOLSTEIN OR DUTCH CATTLE.

I own several Holstein cows raised from stock imported by the late Hon. William Jarvis, formerly Consul to Spain, and P. W. Jones, Esq., Amherst, N. H. I also own Jersey and Ayrshire cows. From my own experience and personal observation, I do not hesitate to state that the quality of the milk of the Holstein cows is equal and that the quantity far surpasses either of the others, although as a breed they may not at present be considered quite as popular. I recently had the pleasure of seeing eight Holstein working cattle, raised and owned by P. W. Jones, Esq., Amherst, N. H., the smallest of which girted seven feet; and at the same time a cow owned by the same gentleman which gave at two milkings 36 quarts. I consider them a tough, hardy breed of cattle, and all qualities considered, the most profitable breed we have. C. H. TILTON.

Ashland, Mass., March, 1868.

EFFECTS OF A FIRST CROSS.

Discussions at the late meeting of the *State Board of Agriculture*, in Concord, Mass.—Recollections of a ramble among the sheep growers in Vermont.—Effects of a first cross.—Sheep breeders in Vermont.—A lamb criticised—disappointed—find a *taint*—the mother no longer a proper breeder.—Views of Dr. Harvey, the celebrated discoverer of the circulation of the blood.

MANY topics relating to agriculture were discussed at the late meeting of the Massachusetts State Board of Agriculture, in Concord, and among them that of *breeds* and *breeding*. The principles which should govern the breeder were clearly defined by some of the speakers, and several interesting and valuable facts and suggestions were drawn out in the course of the discussion. One among them, was upon *the effects of a first cross*. The principles enunciated were not new to us, but some of the illustrations cited to sustain them, were of a highly interesting character.

The discussion on this point brought to mind some of the incidents that occurred a winter or two since, during a week's ramble among the sheep breeders in Addison county, Vermont. We saw and examined as many of the finest flocks as we could reach in several days, through the aid of as fine a pair of coal black steeds as ever man drew "the ribbons" over.

After examining one very fine flock, with as critical a touch and eye as we could command, the proprietor said, "If you had come with the intention of purchasing. which lamb of the flock would you select?" After scanning the flock for a few moments, the favorite was pointed out. Should *you* select that lamb? we asked. No, was the reply. We then enumerated the excellent points and qualities which we thought the lamb possessed, commencing at the nose and ending at the tail! at the same time feeling *a little under par* at the failure. Well, said our friend, good-naturedly, let us take that lamb to the door, where you can examine him in a clearer light, and away from the other sheep. We did so, and no new discoveries were made on our part. We were puzzled, and exclaimed, "Why would *you* reject that lamb?"

"Because he has a taint," was the reply.

"Where is it? I see none."

"Look at his nose, just above the nostril."

And, lo! there was a brownish-black spot, but rather indistinct, about as large as the ball of one's little finger, and that was his condemnation! There was the unmistakable mark of the South Down. On every other account the owner confessed that it was the finest lamb in the flock. But this was evidence of impurity, and rendered the lamb nearly valueless.

In such a case as this, the probability is, that the mother of the lamb will never again produce offspring that is free from taint, and ought at once to be turned to mutton, or bred from "as a scrub." The next offspring would be quite as likely to have a nose, half of which would be black, as of any other color. This is the manner in which deterioration creeps into flocks of sheep, and into all our domestic animals.

On this point there were some remarks recently, by a correspondent of the *Prairie Farmer*, of a highly interesting character. He says:—

A number of years since, a choice lot of South Down ewes, belonging to a neighbor, accidentally coupled with a very coarse native ram; the owner was so incensed that he destroyed the lambs and supposed that would be the end of it; but so long as I knew his flock the stain was not removed. Now here, now there, the blood of the coarse native buck cropped out.

Last fall, while passing through the flock of a noted breeder of American Merinos, in the Green Mountain country, I noticed a peculiar trace about the faces of a number of ewes; a dark tinge on the nose and a peculiar halo-like ring about the eyes. In one or two instances, also, I noticed a tinge of dark about the fetlocks. A neighbor, who knew the flock as well as the owner, informed me that a South Down buck got into the flock several years since, and although his lambs were all disposed of, the trace of his connection with the ewes was so apparent for three years, that several lambs were quietly disposed of, and the traces are now so distinct that a close observer would see them at once.

And, by the way, I have now in my flock of Merinos a ewe which last year got with lamb by a half blood South Down ram which broke into the inclosure. Her pedigree is undoubted, and yet her lamb this year, from a first class Hammond buck, has undoubted South Down marks.

Nor is it difficult to understand how this can happen. If the fœtus be of mixed blood—its blood mingling and commingling with that of the mother would, as Dr. Harvey expresses it, "inoculate her system with constitutional peculiarities of the fœtus," "and as these qualities are in part derived from the male progenitor, the peculiarities of the latter are so engraited on the system of the female as to be by her communicable to all offspring she may subsequently have by other males." This principle holds good, in the improvement of stock, as well as in its deterioration. The use of a first class, thorough bred buck, not only improves the one issue, but engrafts the peculiarities fixed by a long and distinct line of ancestors upon the females indelibly. So at once the value of the thorough bred males becomes evident.

—A large convention of the dairymen of Wisconsin and Illinois was held at Belvidere, Ill., Feb. 11. X. A. Willard, Esq., of New York, delivered an address.

PLANTING PINE SEED.

Will you please inform me as to the best method of planting pine seed, preparation of the ground, season of planting and where they can be obtained.
Gloucester, Mass., Feb. 21, 1868. E. L.

REMARKS.—In an article on "Sowing seeds of Evergreens," about two years ago, we advised a correspondent who made inquiries similar to the above, to go into any forest and inquire of Nature what course she pursues in propagating the various trees that flourish so nobly in her dominions. We shall there learn that the oak and chestnut ripen their fruit in the autumn; the elm and maple in June; the sugar maple in August and September; the yellow birch in July; the white pine in August, and the pitch pine some time during the winter. The fall, then, is the time to gather the burrs of the white pine, for field planting.

Mr. David Alden to whom the premium for the cultivation of forest trees, in Plymouth County was awarded, in 1852, says the proper time to gather white pine seed is from the 25th of August to the 10th of September, and before the opening of the burrs. They should be spread on a tight scaffold, away from mice, and when dry can be threshed with a flail without injuring the seed. We believe the seed is also usually kept for sale by some of the city seedsmen. The seed is sometimes planted in the fall and sometimes in the spring. Mr. Alden found that the seed sown in the fall vegetated too early and the plants were killed by late spring frosts. He preferred spring planting.

But these pine seeds placed on the impoverished soil of an open field, and exposed to the full glare of the sun and the unobstructed sweep of drying winds, are so differently situated from those planted by nature on a soil of decomposing leaves, and protected by the shade and shelter of the forest, that much trouble is found, in practice, in raising a crop of pine trees, on our worn-out land, from the seed.

In the Transactions of the Massachusetts Agricultural Societies for 1856, we find the statements of three applicants for the Plymouth county premium on Forest trees. Mr. S. Hayward planted 153 rods, in Oct. 1829, in hills 5 feet 3 inches apart, each way, on land sown to rye that year, putting four seeds in a hill, and covering them one-fourth of an inch with earth. Many of the seeds sprouted in the fall and died in the winter. The trees were trimmed in June, 1855, and many of the poorest cut out. In 1856 there were 708 trees standing on this lot. On another lot of one acre and 16 rods of grass land, which did not yield enough to pay for mowing, he sowed pine seed broadcast in Dec. 1840, upon the grass. In 1856 there were 3019 trees in a growing state. Another lot of two acres and 53 rods was sown with white pine seed, broadcast, and, as before, upon the grass, half in in December, 1840, and half in March, 1841, without any noticeable difference in their germination or growth. In 1856, 3726 trees were growing on this lot.

Mr. R. Sampson, another claimant, began by planting seeds, but as they did not come up well, he resorted to transplanting. Those taken from the woods did poorly, while those taken from the roadside, pastures, and open fields, did well. He set some 8000 trees on about twelve acres, and regarded the last week in May or the first in June as the best time for transplanting.

The third claimant, Mr. J. Copeland, sowed the seed on seven acres of rye land,—part in February, and part early in April. Neither sowing came up well, and he resorted to transplanting, using those from ten to twenty inches high In transplanting, he said we gain from five to six years in the growth, and with less labor than in gathering and planting the seeds. He found that two men could set 500 trees, enough for half an acre, in a day. He regarded April and November as the best months for transplanting. If set the last of May or first of June, the dry weather that frequently follows prevents their growth, if it does not kill them.

Mr. C. Morton of Kingston, commenced transplanting pine trees in 1848, on land that produced nothing but mullein and tinkham weed. Of some 400 transplanted the last of May not one in twenty died, while of those transplanted by the same process in the October following, scarcely one out of twenty lived. His method was to furrow the ground as for corn, only wider, select trees from pastures, &c., take them up with a shovel with considerable sod and soil about the roots, place them in the furrow at proper distances, and haul the earth around them. In one case his hired man with one horse furrowed the ground, collected

the trees from an adjoining pasture, and set them out on half an acre in one day. In 1862 some of those set in 1848 were more than 20 feet high, and measured near the surface of the ground nearly three feet in circumference.

CHEESE FACTORIES.

The Massachusetts Cheese Manufacturers' Association, held their annual meeting at the Town Hall in West Brookfield on Thursday, Feb. 20, 1868. We are indebted to a correspondent for the following report of the proceedings, and regret that ill-health deprived us of the pleasure we had anticipated of meeting our friends on this occasion.

The following officers were elected for the ensuing year:—

President—Hollis Tidd, New Braintree.
Vice Presidents—D. S. Ellis, Warren; J. F. Davis, Barre.
Secretary—N. S. Hubbard, Brimfield.
Treasurer—B. F. Hamilton, New Braintree.

Eight factories reported, viz.: Barre Central, Barre Cheese Company, Hardwick Centre, New Braintree, Wilbraham, Worcester County, at Warren, Coy's Hill, at Warren, and Warren Cheese Company, at Warren.

These factories received 14,053,136 pounds of milk, and made 1,447,355 pounds of cheese. It took from 9.29 to 10.40 pounds of milk for one pound of cheese. Coy's Hill, in Warren, averaged the least, and Wilbraham the highest.

The following is an abstract of the reports from the several factories:—

BARRE CENTRAL received 2,365,456 pounds of milk, and made 248,023 pounds of cheese. It took 9.50 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2.38 per 100 pounds. Net price per 100 pounds, $12.01. They also report a net profit on hogs of $203.78.

BARRE CHEESE COMPANY received 2,295,834 pounds of milk, and made 240,328 pounds of cheese. It took 9.55 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2.60 per 100 pounds. Net price per 100 pounds, $12.08. Profit on hogs of $191.98.

HARDWICK CENTRE received 2,485,585 pounds of milk, and made 264,267 pounds of cheese. It took 9.40 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2.41 per 100 pounds. Net price per 100 pounds, $12.60.

NEW BRAINTREE FACTORY received 3,063,048 pounds of milk, and made 309,270 pounds of cheese. It took 9.90 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, frieght and marketing, $2.51 per 100 pounds. Net price per 100 pounds, $11.82.

WORCESTER COUNTY cheese factory at Warren, received 2,045,209 pounds of milk, and made 202,239 pounds of cheese. It took 10.11 pound of milk for one pound of cheese. Whole expense of manufacturing and materials, $2.35 per 100 pounds. Net price per 100 pounds, $12.2776.

WILBRAHAM FACTORY received 610,184 pounds of milk, and made 58,670 pounds of cheese. It took 10.40 pounds of milk for one pound of cheese. Whole expense of manufacturing and materials, $2.00 per 100 pounds. Income per 100 pounds, $14.50. (Probable gross sales).

COY'S HILL FACTORY, Warren, received 289,079 pounds of milk, and made 74,174 pounds of cheese. It took 9.29 pounds of milk for one pound of cheese. Whole expense of manufacturing, materials, freight and marketing, $2.744 per 100 pounds. Net price per 100 pounds, $11.446.

WARREN FACTORY, at Warren, received 498,741 pounds of milk, and made 30,384 pounds of cheese. It took 9.90 pounds of milk for one pound of cheese. Expense of manufacturing, $1.13 per 100 pounds. Net price per 100 pounds, $11.24.

Amount of Capital Invested.

Barre Central . .	$7,500.00	Wilbraham . .	$2,500.00
Barre Cheese Co.	5,053.23	Coy's Hill, Warren	5,500.00
Hardwick Centre	4,250.00	Warren	2,778.00
New Braintree .	8,000.00		
Worcester Co., Warren	$4,600.00		$40,181.23

At this meeting the following resolution was adopted, and we acknowledge with much pleasure the receipt of a certified copy thereof from the Secretary, N. S. Hubbard, Esq.:—

Voted, That the conductors of the Agricultural press of Massachusetts, be made and constituted honorary members of the Association, and that the Secretary be directed to apprise such conductors of the fact, and hereafter to notify them of the meetings of said Association.

WHY DAHLIAS DEGENERATE.—Mr. E. Ferrand, of Detroit Michigan, makes the following statement upon this subject, in the New York *Horticulturist*:—

In order to propagate the new varieties of dahlias, and make hundreds of plants where only a few would be propagated by the usual methods of separating the tubers, or making cuttings from *forwarded* growths in early spring, the European raisers of dahlias graft them on roots in winter, and to that effect use roots of the strongest growing varieties. To make those grafts, only one bud is sufficient, so that when the owner of a good variety desires it to remain scarce, for pecuniary reasons or other, he uses scions with only one bud at the top; those plants grow and bloom as in the ordinary way, but in the fall everything is gone of the new variety, and even the tubers, except those (tubers) the upper part of which has been used for stocks, and which may have yet some dormant buds; the same when planted afterward by the uninitiated produce the flower of the stock and not that of the variety grafted on it.

When instead of a scion with a single bud, one with a second bud at the base is used, inserted into the stock, the lower bud grows into roots which naturally reproduce flowers identical to the variety of the scion.

BUTTER CUP, OR TALL CROWFOOT.

This "flower of the field" is a native of Europe, but is now common in New England and other parts of the country. There are several varieties. The one represented by the cut is named *Acrid Ranunculus* by the botanists. The stem is from one to two feet high, as shown, on a reduced scale, by Fig. 3. Fig. 4 is an enlarged flower divided to show the insertion of the distinct parts on the receptacle. Fig. 5, a head of seed pods, and fig. 6, a separate pod. In some localities this weed is so abundant in meadows and pastures as to appear at a distance, when in bloom, like an unbroken sheet of golden yellow. On account of their very acrid juice, cattle do not eat them in their fresh state, but when cut with the grass and dried, the acridity is dissipated, and they become apparently quite innocuous. Before the introduction of Spanish Flies, says Mr. Darlington in his "American Weeds and Plants," these and other species were used to produce blisters; being uncertain in their operation, they are seldom employed. About a dozen other species are to be found in the woolands and meadows, and a few aquatic ones in streams and ponds. The only one of these which assumes the character of a weed at the north is *R. repens, L.*, the long stems of which are usually prostrate and rooting at the joints; it has large bright flowers, and is sometimes common in wet meadows.

A variety grows in Europe with a fleshy bulb, which is highly acrid, and which, it is said, is sometimes used by beggars to cause ulcers upon their bodies, in order to excite the sympathy of those to whom they appeal for charity. This variety is a troublesome weed.

PRACTICAL SKILL.—Many presume to think that they can leave the workshop or bar and succeed in farming, but they are sure to fail, no matter how well versed they may be in theory, or, as it is called, book farming. Beside, a person may raise good crops and valuable stock, but one great object is not yet gained, which is to dispose of our products to good advantage. Young farmers have to contend with this, and in trading with their brother farmers they are sure of being taken in if they know not the relative value of stock. Sharks of every size and grade are around him to prey upon his ignorance and good nature, and the result is an empty pocket and a store bill. Out West here you must learn the art of trading. To be a judge of horses, cattle, hogs, and sheep, as well as of the manner of feeding, breeding, &c., is no small matter. The want of this keeps thousands of farmers poor, and will, until they learn, by bitter experience, to change their way of doing business. In short, he only can be a successful farmer who has taste and experience in all the various branches of this most various of all pursuits. I have tried the theoretical, and the advice of others, and failed, and it was only when, discarding all others, and trusting to Dame Nature and common sense, that I have realized a fair competency.—*S. W. Williams, Mechanicsburg, Ill., in N. Y. Tribune.*

SAWDUST AS A LITTER.

LENGTH of hair, thickness of hide, and a great amount of vital energy are conferred upon our domestic animals, but it does not follow that they do not need protection from the weather, or that they are not sensibly improved by whatever tends to their comfort and contentment.

A cow that stands upon an uneven floor, or one that is too short, or whose neck is cramped between stancheons that are too narrow, will be in a constant state of uneasiness and discomfort. An ox that has labored all day, and then obliged to lie upon bare planks at night, with currents of cold air coming up between them, will not find that rest which he would if the floor were tight and well covered with some kind of soft and clean litter.

So swine love to wallow in the mire, but that is one of the means to which they resort to keep off insects, and in the end, to keep the skin clean and in a healthy condition. No animal, however, enjoys a clean and warm bed, better than the hog, and if *educated* properly, few animals will keep their bed more clean. They will gather up the straws from every corner of the room, and *make up their bed* in a compact manner, with as much assiduity and pains-taking, as the best chambermaid in the land shows! If the hog is a sloven, and does not keep his bed-chamber clean, it is more frequently to be attributed to the inattention of the owner, than to any innate disposition of the animal to live in the dirt.

Those who drive teams upon the road soon become convinced that their animals will perform fifteen to twenty per cent. more labor, for having well littered floors to lie upon at night.

These are some of the reasons why we can profitably *use sawdust as a litter*. But there are others. A correspondent of the *Scottish Farmer* wrote to the editor that, from the fear of introducing the Rinderpest through straw brought from farms at a distance, he was induced to litter his cows with sawdust. He then inquired what admixture would most speedily decompose the sawdust, and thus improve the manure as a fertilizer of the land? To which the editor replied:—

"Sawdust, in its natural state, is not easily decomposed, but it is an excellent absorbent for liquid manure, and when well soaked with urine, ferments readily. It is, therefore, a valuable material for bedding cattle, and no difficulty will be experienced in getting it to decompose, provided it has been thoroughly saturated. At one time we had the command of a large quantity of sawdust, which we used with great advantage as litter, and also for mixing with the night soil of some extensive public works, for which purpose it answered admirably in every respect. It is stated by chemists that sawdust, during decomposition, forms certain acids, which act as excellent fixers of ammonia, and that when well mixed with dilute sulphuric acid, it is one of the best materials which can be employed for fixing the ammonia given off in stables."

There are other plain reasons why we can use sawdust as a litter economically. Besides affording a soft bed for the animal to lie upon, it is an excellent absorbent of the liquid droppings of the stock, which are too often allowed to run to waste.

We have no doubt that a barren piece of land may be brought into a high state of fertility by the use of sawdust, and without the application of manure. The process would include a period of several years, undoubtedly, but might be cheaper in the end than any other, if the sawdust were abundant and near at hand. It would be something as follows:—Apply a dressing of sawdust in the spring, and plough it in just so as to cover and mix it with the sand. In mid-summer add another dressing and plough. If weeds appear, plow again in the fall. A single horse will be sufficient to do the work, so that the cost of labor in applying the sawdust and ploughing the land will be all that is invested in it, excepting interest on the value of the land,—and that would go on if it were not touched.

In the course of two or three years, under this management, weeds and grasses would appear, and when they become numerous, plough again, sow clover seed, and when the plant is nearly ripe, plow that under. Level, sow clover seed again, and so continue until the land is so abundantly supplied with vegetable matter as to bring any of the common crops of the farm! Then manure liberally, occasionally ploughing under a crop of clover, or straw of any kind, and you will have a constantly improving soil that will continue a good soil until the end of time.

This process we have stated from our own experiments in a small way, and from numer-

ous statements made to us of the effects of dry vegetable matter upon a lean soil. We find in *Johnston's Elements of Agricultural Chemistry*, the following remarks, which corroborate the views we have expressed:—

"*Sawdust*, with a view to slow amelioration, or dry vegetable matter of any kind may, if in a sufficient state of division, be added with benefit to the soil. Even sawdust applied largely to the land, has been found to improve it,—little at first more during the second year after it was applied, still more during the third, and most of all in the fourth season after it was mixed with the soil. That any dry vegetable matter, therfore, does not produce an immediate effect, ought not to induce the practical farmer to despise the application to his land—either alone or in the form of a compost—of anything he can readily obtain. If his fields are not already very rich in vegetable matter, both he and they will be alternately benefited by such additions to the soil.

"Saturated with ammoniacal liquor, or with liquid manure, sawdust has been profitably used, and without further addition, in the raising of turnips. It may also be charred, or by alternate layers of quick-lime, and thus beneficially applied."

The decomposition of sawdust will take place more rapidly where the soil is manured; but our object in detailing a process has been to enable the farmer to bring up a piece of waste land to a state of fertility, by applying a *capital in labor* upon it, and without using the manures which he needs for the land already intended for his crops.

CARE OF ANIMALS IN WINTER.

In wintering animals, there are some things to be considered besides the mere feeding and sheltering them. They have rights, tastes and habits that must be regarded, or they will be discontented and perhaps suffer.

Thus gentle and peaceable cows may be turned into the yard with a dozen rollicking steers or as many huge oxen, which will race and push them about, and not only deprive them of a fair share of the fodder thrown out, but allow them no time for rest and to "chew the cud of contentment."

So they may be exposed to the frolics of one or more colts, which will chase and bite and kick them until they become nearly exhausted before the time comes for tying them up at night. All this may be done on the part of the colts in the way of fun, but as the frogs said to the boys who threw stones at them, "it may be fun to you, but it is death to us." The colt has no milk to make, no wood to draw, does not go to mill or market, but is full of vim and mischief, and so practices his powers of attack and defence on the poor cows and young cattle which are shut up with him in the yard.

It is a good practice to separate the stock. Keep the colts in a yard with a fence so high that they will not attempt to jump over it. Allow no carts, wagons, ploughs, harrows, or lumber of any kind to remain in it, which they can run against or stumble over and injure themselves. This is the practice, we are well aware, with those who engage in the raising of colts to considerable extent, but where one or two only are kept, they may be seen daily disporting themselves pretty much in the manner that the boys enjoyed the sport and exercise of firing stones at the poor frogs who come to the surface of the water for a breath of air.

Especially, do not compel the calves to run with larger and older animals. Sheep and calves may, perhaps, run together without detriment to either, if in small numbers; of this, however, we are not quite certain. There may be objections of which we are not aware; some of our experienced friends can tell us. Finally, read and remember the following by a correspondent of the *Germantown Telegraph* on keeping

CALVES WITH SHEEP.—Late calves, when they come to the barn in the fall, will, if confined in yards with older animals, frequently sicken and become debilitated. Being weak and small, they are usually shoved about, and deprived of their due share of the food, and in consequence, 'fall away' rapidly. Now, I never allow animals of this description to associate or be confined with larger ones, but put them with my sheep, where there is no danger of their doing or receiving harm. Sick calves, I have observed, often pick up and devour with avidity the hay and straw from among the sheep dung. It is medicinal, and I know of no article that has a more immediate and salutary effect in restoring diseased calves to health, than sheep dung. I have practiced this usage for many years, and have never lost an animal, though I have had many sick when they came to the barn."

—The Hocking county, Ohio, *Sentinel* says: "A terrible disease is now raging in this county among the hogs. Some farmers have had as high as fifteen and twenty die in one day. It is caused by sore throat. Turkeys in great numbers, have also died, the present week, of the same disease."

COST OF CHEESE.

The Herkimer County, N. Y., Farmers' Club recently discussed this subject. The reporter for the *Utica Herald* remarks that in old times, Herkimer county farmers did a fair business in making cheese at 7c per pound. This fact as a basis has led many astray. They naturally conclude that all above the 7c which cheese now brings must be clear profit. The majority of farmers keep no current farm accounts. They can not tell what a bushel of grain or potatoes costs, or in fact any other farm product. They sell their products at prices which seem to be high, very much higher than in former years, and conclude that they must be laying up money rapidly. At the end of the year, when all the products have been sold and all the various accounts and expenses are to be paid, the rugged fact presents itself that there is "no money in the locker," and there is some considerable astonishment where it has gone. The first thought which occurs is that some useless extravagance has been indulged in, or more than usual losses have eaten into the profits. On carefully revising the operations of the year, men fail to find the leak.

Three detailed estimates of the cost of making cheese were submitted, two of which showed an actual loss, with cheese at $14.228 per 100 pounds. The annexed statement was made by Eleazer Rice, of Fairfield, Herkimer County, who, we are informed, is one of the best farmers in Herkimer county, as well as one of the most successful—a sound, clear-headed business man. In this estimate, the farm is thrown in, or called nothing, nor is there any charge for personal or family services or labor.

RECEIPTS.

50 cows, 400 pounds to the cow, 20,000 lbs 14c	$2,800

EXPENSES.

Interest on cows at $70 and utensils, wagons, &c., $5,000 at 7 ₱ cent	$ 350
Depreciation of cows and loss from disease, average	350
Depreciation on teams, utensils, &c.,	250
Fertilizers	36
Taxes on land and personal property	150
Horse shoeing and repairs of tools, &c.,	50
Repairs of buildings, fences, &c, average	150
Insurance	8
Incidentals	50
Paid for hired help	500
Board &c., of hired help	250
For making cheese at factory, boxing, &c.,	400
Total	$2,544
Profits	$256

The price of farms is very high in Herkimer. One of the gentlemen who furnished an estimate of the cost of making cheese paid $130 per acre for 81½ acres. The sale of another farm at $140 per acre was mentioned, and was said to be a fair average of lands in that vicinity. Remarks were also made upon the high cost of labor, which had ranged from $25 to $30 per month, with board, which, with flour, &c., at present prices, equalled a salary of $500 to $600 per year for the most ordinary laborer.

FARMERS' CLUBS.

It is sometimes said by members of farmer's clubs that a subject selected for discussion is not a *practical* one, because it does not relate directly to the care of stock, the handling of the soil or implements, or the general management of crops. Is it so? Will not discussion upon any topic that relates to the business of life expand the mind, bring new or useful ideas to it, and give it new powers to discuss those questions which are of the most importance to us?

The great need of the farmer at the present day is the want of more intelligence upon *general things;* a knowledge of *principles*, rather than of practices. He guides the plough well, and knows that without this preliminary operation he could secure no profitable crops. He is satisfied, too, that the crops absolutely require a still further comminution of the soil than the plough affords; but has he inquired what principles must always be at work in the soil in order to give him any crop, and especially to give him an abundant and profitable one? He must find what these are, and then he will know how to prepare his soil to set them at work.

It is not enough for the farmer that he discuss over and over again, the manipulations, merely, of the farm. He must venture more. He must have questions before him that will call him away in some degree from his life-long practices on the surface, to the rich and unused treasures which lie below—the *principles* which give life and action to all.

He must not only prepare his soil for the manures which he applies to it, but for those more subtile substances which his hands cannot grasp, but which the soil can grasp and retain if it is in proper condition to receive them. This will afford him a delightful study, and will lead the mind gradually to that general intelligence that is so much needed.

The question as to what subjects are proper for discussion at the farmers' club meetings, has been well answered by Mr. DANIEL F. ROGERS, of Ill., at a meeting of the Farmers' Institute in N. Y. He says:—"In my opinion there is no subject of any considerable importance to mankind, a liberal and intelligent discussion of which is not within the proper limits of any farmers' club. Many farmers seem to think that farmers' talk should be only of farm stock—pigs, poultry, ploughing and manure. There is nothing in the occupation of a farmer that makes it necessary that he should grovel in the dirt. There is nothing in the occupation of a farmer to prevent his being an educated man. Intelligence with them should be as free and glowing as the sunshine and air in which we live."

This statement elicited warm applause and brought out several other suggestions upon the same subject.

For the New England Farmer.

IS IT PROFITABLE TO MILK COWS IN THE WINTER?

A Discussion by the Irasburg Farmers' Club, reported exclusively for the FARMER, by the Secretary.

E. P. Church claimed that to give cows extra feed, say meal and grain, to make them continue to give milk in winter, is injurious, causing them to be less thrifty the next summer, when kept only on grass. Prolonged milking is also detrimental to the calf of a stock cow. So he let them go dry three or four months, to gain flesh milked away through the summer. Cows should be in good flesh when they come in in the spring, and would feed meal to them at that time. Cows that are milked are more affected by cold than those that are dry. Then, a cow can give only about a certain quantity of milk in a year, and we can get it all in the summer, or be all the year about it. Winter butter is usually of poor quality, and it is a disagreeable job to milk in cold weather.

Mr. Tenny was inclined to agree with Mr. Church. Young heifers should, perhaps, be milked longer than old cows, to establish milking habits. He believed it best to keep cows fat; the fatter the better. He had known cows to have four quarts of meal each, while at grass. It may have been a damage to them, but he doubted it.

A stranger from Addison County said it was the custom there to let the cows go dry three or four months, and feed meal before they calve and until they go to grass. If we give extra feed before they are dried off, so as to make them hold out their milk, they will not do as well the next summer.

Mr. Hines lived in Franklin County when they first began to make cheese there to sell, and now it is the greatest dairying section in the State. There are some who still say, "I would just as soon have my cattle come in poor as not." He did not state the product of such cows, but he said the class who are careful to have them "come in fat," find no difficulty in getting 300 pounds of cheese and 50 pounds of butter per cow. These are the most successful dairymen. The reason why many fail to realize the benefit of extra feed, is because they leave off too soon. The meal should be fed until grass is large enough to give a full supply.

Mr. Tenny fully agreed with Mr. Hines as to the importance of continuing the meal, and said that a few miles north of Montpelier, he saw a Mr. Wilson carrying in two pails of milk, and learned that he had only two cows. On inquiry he learned that Mr. W. fed corn stalks cut by a machine, put into a very tight plank box, wet with scalding water, then covered securely and left about twenty-four hours. The stalks became tender and were eaten greedily by the cows, and they continued in milk until they came in again. If fed on hay they would easily dry off.

Mr. McClellan said he disliked to milk in the stable, and therefore he let his cows oft by milking once a day, soon after he knew they were with calf. He had milked cows quite late that were fed extra, but the next season they were a third less profitable.

Z. E. Jameson believed that butter could be made as profitably the first part of winter as the last, for in fall the farmer has a greater variety of fodder and more roots than in spring. As to milking, the stable is the best place, as the cow stands quietly, and can be kept clean. He believed the calf of a stock cow will not be injured if the cow is milked until within four weeks of calving. Those who practice this method make more butter per cow in a year, than those who milk two months less.

For the New England Farmer.

CAPITAL AND LABOR.

Many appear to think they have found a solution of the vexed question of the rights of capital and labor in the admission of the laborer to a share in the profits and losses of the business in which capital is invested.

While admitting that success has attended such arrangements, under peculiar circumstances, I am skeptical as to its being generally so; and in fact think there are good reasons for supposing it will not be, so long as there exists so much real lack of foresight and economy among the laboring classes. How few of the many who are dependent on their daily labor for their daily necessities, exercise proper wisdom in husbanding their earnings, especially when times are good and af-

ford an opportunity, if judiciously improved, to lay aside quite a sum against future needs. It appears as if it were a general rule, the more the income, the greater the wastefulness; the greater the opportunities for thrift, the less the inclination to improve them. If these are facts, and few careful observers will dispute them, what improvement are we to expect in case these persons are to be pro-rata participants in the profits of the workshops and mills in which they labor?

Some no doubt will contend that the *fact* of such a connection will beget self-respect, self-reliance and personal interest in the results, that will eventuate in developing the very thing we find they so greatly needed. With some we are ready to admit this result might be looked for; but with the masses we are not justified in expecting it. Business might be divided equally with the workmen to-day, and to-morrow many would be in circumstances to require you to do the same again, and so on until the entire capital was gone.

The truth is, man has not become fully satisfied with the law, given by his Maker when in Eden, that by the sweat of his face he should eat his bread. It is one of the many "pricks" he foolishly persists in kicking against. He tries various expedients to evade the law, but in vain. Sooner or later he finds to his sorrow, that if a man will not work, neither shall he eat. This law implies or enforces the principle that we should earn and wisely use our earnings, so that we may have enough and to spare.

I have in my mind an illustration of this want of thrift in a man now employed by me. The business requires a capital of about three thousand dollars. To encourage this man to interest himself in the success of the business, I gave him very liberal wages, so liberal indeed, that I could see no good reason why he should not be able to lay by two hundred dollars a year, after supporting his family as well as those around him supported theirs. I also told him that when he had saved up a thousand dollars, I would sell him one-third interest in the business, and continue his pay as before. He set out with this prospect before him, but to-day he is involved in debt on every hand. It would seem as if the very liberal income he received was really an evil to him.

How to manage wisely with such men is a problem I am unable to solve. I have again renewed my promise to him, and he is again trying the experiment. Wealth will concentrate in the hands of the few, unless we can devise some method of co-operation, which, while it gives the laborer his equitable share in the results of the business, shall at the same time confer on him those business and moral qualities that will enable him to appreciate and make a proper use of the position in which he is placed, and the opportunities he enjoys. He must, of necessity, be brought to feel more fully his manhood, and seek for culture and elevation of character. He must *feel* the necessity of avoiding the drunkard's cup, the loafer's resorts, and the haunts of the vicious; and that the present is inwrought with the future as intimately as web and woof. Failure of present duty will more or less unmake his future. If by any means we can bring men to attempt to *level up* instead of trying to *bring down* to their level those who by patient industry, careful economy, and faithful use of their God-given powers have outstripped them in life's race, we shall have the best foundation laid on which to rear our hope of success. Then indeed may we with cheerfulness look the future in the face and feel that by the smiles of a beneficent Providence all is well. To attain this end men of means, and the agents of corporations must put their hand to the work, training and educating their employees to a better appreciation of their individual responsibility, and a better understanding of the relation of present duty to future success. I can conceive of no other means of escape from our present ills. This failing, we must of necessity go on in the future, as in the past, with capital and labor at a dead lock most of the time. K. O.

Broad Brook, Conn., Jan., 1868.

For the New England Farmer.

THE SMALL MANURE HEAP.

In an article in your paper of Jan. 18, it is asserted that "a large manure heap is the farmer's great mistake." This is Dodge Hayward's theory, or "chemistry" as he calls it; a theory opposed to the belief and the experience of all tillers of the soil. He says, "All vegetable matter, including the grass of the western prairies and the leaves of the forests of the north, are useless, as manures, except for the small amount of mineral they contain." Then he goes on to say, "The loss of fertility in our lands is not caused by the loss of vegetable matter, but by the loss of the minerals of the soil."

Chemistry informs us that nothing is added or lost, in all of nature's operations. If you burn a block of wood you have for the ten pounds of wood, an equal number of pounds of water, carbon, creosote, and ashes. Mathematics teach us that if we *borrow* we must *return*.

Has this lecturer found a mineral that will supply *all the fertilizing* matter that the soil requires? If so, great must be his success. His theory is something to this effect: the more fuel you burn the *less* heat you will get! He says, "the rain, dew and snow supply all the material of a vegetable nature;" "manure is not injured by drying," and that if you "let four loads of horse manure burn itself till it is reduced to one load, you have just as much fertilizing matter as when you had four loads!"

Now every farmer and gardener will tell you that horse manure that is "burnt up," as they

term it, is not so valuable to produce crops, as that not "fire-fangled." Every person of common sense, well knows that to cut the grass year after year, from a given piece of land without returning to the land any fertilizer, impoverishes the soil, and it becomes barren and ceases to yield a crop of anything.

It is not simply mineral that the impoverished land needs. It wants that which has been taken from it. It wants grass, leaves, barn-yard manures, and compost. The smaller your manure heap, the smaller barn and cellar you will need to store your products. Like begets like; minerals are minerals, and vegetables are vegetables. Vegetables of all kinds contain but a very small per cent. of mineral matter. A cucumber contains 97 parts of water in 100. Beans contain only 14 parts of water, and 86 parts are dry matter, of which 38 parts are carbon.

Hayward's theory would be to burn one ton of hay or manure to ashes, and then spread that on the land to grow the crop. Is that either scientific or natural? The ground wants heat and warmth,—stimulus, carbon and ammonia; and to secure these you must have your ground finely broken up and light, so that the air can more or less circulate through it. Hay, orts or straw (that have been well saturated with urine) placed a few inches below the surface and covered with dirt, generate heat by fermentation, and fill the soil with ammonia, and afford plant food. I contend that manure is *wasted* by drying. How? The ammonia and other principles are lost in the air. When covered with soil these principles are retained, and impart vitality to the growing plant.

The assumption that mineral matter is all that is needed to grow a crop, is a fallacy. What is the ground itself but minerals?

I once planted the ordinary garden vegetables on a soil to which no manure, except a sprinkling of ashes, had been applied for years. It had been, as farmers say, well "skinned." My crops were sad failures throughout. Having faith in manures, rather than in minerals, I took a quantity of my garden soil and formed a basin under the privy, into which the vines and weeds from the garden and yards, with ashes and every other vegetable matter within my reach, were put, together with one peck of lime. In the spring I added another half cord of the soil, and the whole was forked over and well mixed. A few days after the ground had been spaded, this heap of compost was spread on and raked in. Apparently, every seed I planted germinated, and I had sweet corn, beans, cucumbers, marrow fat squashes, carrots, turnips, peppers, beets, onions, mustard, lettuce, peppergrass, summer squashes, and other vegetables, all of good size and excellent quality, and in striking contrast with their starved and Liliputian predecessors of the previous season. The second year I repeated this operation, omitting the lime, and raised about fifteen hundred pounds of ripe and green vegetables, on fifty feet square of a small garden; two crops having been grown on a part. The first year my crop of potatoes was not more than half as heavy as the seed planted, but this year I had Jackson Whites as good as ever were set before a president. My potatoes were raised in a bed as follows: Having forty or fifty pounds of salt hay—I presume any other would have been as good—I put it into a bed, some fifteen feet square, from which the soil, to the depth of six inches, had been thrown out on the sides after the ground had been prepared for planting; the subsoil also having been spaded up light. The soil was then thrown back upon the hay, sufficiently to cover it, and the potatoes were dropped in line or drills, about eight inches apart, and covered up with soil, but so as to leave the potato bed a little lower than the surrounding land. I kept the weeds out by pulling them up while small, as the vines were too near together to admit of the hoe, though the ground was occasionally loosened with a very small rake. They were several times sprinkled with soap suds. The result was a yield of about three bushels of beautiful potatoes.

DR. BOYNTON.

Lawrence, Mass., Jan., 1868.

THE "JAMESTOWN" BREED OF CATTLE.

The Norfolk County, Mass., agricultural Society, awarded the "Wilder Cup," the first premium on herds of milch cows, to Mr. J. W. Gay, of West Dedham, who entered his herd of fifteen cows, eleven of which were raised in Dedham, and were entered as "pure or high grade Jamestowns," a part of which were dry, and others nearly so, the herd giving from two to eighteen quarts each per day.

As to the origin of the Jamestown Breed, the chairman of the committee, A. W. Cheever, Esq., furnishes a statement, by Colonel Stone, of Dedham, from which we condense the following:—

"In 1847, Capt. R. B. Forbes, as commander of the U. S. ship Jamestown, went to Ireland with a cargo of provisions for her starving inhabitants. On his return, the Lord Lieutenant of Ireland, wishing to confer some favor on the commander, made him a present of a fine Suffolk heifer, which proved to be one of the deepest milkers, giving in her flow, twenty-six quarts beer measure of the richest milk. She was a remarkably fine specimen of this superior stock, which stands high and prominent for the dairy in that country.

On his return, he disposed of the cow and gave the proceeds to the Irish Charity Fund. John Marland, of Andover, Mass., was the purchaser, and when he disposed of his farm she passed into the hands of John D. Bates,

of Swampscott, Mass., and afterwards into the hands of Mr. Osborne, of Danvers, Mass.

We are not aware that she ever had but one heifer calf. This one was owned by Mr. Wallace Thaxter, of Boston, and proved a superior dairy cow. Several of her bull calves were raised in this vicinity. Nearly all her progeny were without horns, showing the remarkable strength of the *Suffolk strain*.

In 1854, this remarkable cow dropped a bull calf, which was secured by Dr. Wight, of Dedham, Mass., and raised by Thomas Smith and named Jamestown, after the noble ship that brought his mother to this country. He proved himself as remarkable in his progeny as that of his kind on his mother's side; his sire was *Beverly*, a thoroughbred Jersey, out of *Flora* by the 'First Prize Bull' at the Royal Agricultural Show in Jersey. *Flora*, the mother of *Beverly*, was imported by Mr. Motley, and proved one of the most remarkable of that celebrated stock, having made sixteen pounds of butter a week.

This stock hold qualities which I consider very valuable in a dairy stock. They are very gentle, I never having known a vicious animal, unless they were too strongly crossed with the Jersey. When 'Jamestown' was five years old, a four-year-old boy could manage him in safety; he was worked in harness and perfectly handy. They are perfectly hardy, good feeders, and hold out in their milk remarkably, which I consider the great recommendation. I know of several that give milk the year round."

In an essay on cattle breeding, published in the Transactions of this society for 1859, Mr. Sanford Howard, says:—

"The Suffolk breed is without horns. It was formerly somewhat noted for dairy properties, but it is not extensively kept at the present time. It is not absolutely known that any of this breed have ever been imported into this part of the country; but polled or hornless cattle, which were formerly quite common here, bear more resemblance to the Suffolk than to any other breed. They certainly have no claim to the title of Galloway, which is sometimes applied to them, being different in color, (the Galloways are almost invariably black,) shape and characteristics. A cow was also brought to this country from Ireland, several years since, in the ship Jamestown, and hence was called "the Jamestown Cow," which closely resembled the Suffolk I have seen in England. A bull from this cow by a Jersey bull has been kept in Dedham several years, and has left a progeny which in general appears to possess superior dairy properties."

In closing their report the committee say, they are glad that Col. Stone is endeavoring to preserve and perpetuate in its purity as far as possible this remarkable "Jamestown stock."

HORSES IN VERMONT.

After alluding to the statistics of horses in Vermont, which show a decrease of nearly 50 per cent. since 1860. Mr. Ezra Meech, of Shelburne, Vt., one of the most intelligent farmers of that State, writes as follows in a communication to the *Country Gentleman:*

Our horses have been decreasing in number, and I fear degenerating in those qualities that make a valuable horse. It is true, we have a few fine specimens remaining, but when we look back fifteen or twenty years, we had then many more good stock horses than we now have, and it was no uncommon thing at that time to find four or five pairs of nice matched carriage horses in many of the towns in northern and western Vermont.

I am convinced that great improvement may and ought to be made in the horses of Vermont, and much is yet to be learned, in my opinion, in regard to the best manner of raising them. I was in conversation a few years ago with the late Col. Orvis, a celebrated cattle raiser of St. Lawrence county, N. Y., who said to me that he could give me the whole secret of success in producing good cattle, in a very few words, which were as follows:—"Get a good breed and make them comfortable"—neither let them want for food, nor suffer with heat, cold or wet. But in my experience in raising horses for the last twenty-five years, the same rule will not apply unless the horse is comfortable where the horned animal would die. I have no question but that better horses can be produced by exposure out of doors, away from sheds or barns, during the whole time of their growth, getting their feed in the way nature designed they should, than can be produced by the way commonly practiced. The horse will generally grow larger, much better developed, more hardy and healthy, and less liable to disease or accident, besides saving much expense in the way of fodder. I took from a pasture thirteen horses and colts on the 14th day of January, that up to that time had had nothing but grass, at which time I could not see that any of them had lost flesh, unless three or four breeding mares whose colts are still with them; and had it not been for these mares, they might still be in the same pasture, but fearing that the colts might, by remaining longer on the mares, injure the next foal, I took them up to separate them. There is no trouble or difficulty in pasturing cattle and horses here in Vermont from nine to ten months of the year in all seasons, and most years longer. For the last twenty years I have had from ten to twenty work horses and colts that have run out, and they have not consumed an average of 500 pounds of fodder to the animal.

I would like to be one of eight or ten to invest $50,000 in a farm near the lake, and de-

vote it exclusively to producing something better in the way of horses, than we now have.

REMARKS.—Some of the geologists have supposed that in "old times" New England was an island, the valleys of Lake Champlain, the St. Lawrence and the Husdon rivers, being occupied by an arm of the sea. Be this as it may, it is well known that the heavy, clay soil of the valley of Lake Champlain is remarkably productive of grass and all forage crops. The amount of snow, also, which falls in Shelburne is from one-fourth to one-half as large as that which falls in towns on the easterly slope of the Green Mountains. These facts should be taken into consideration by farmers in other sections who propose to adopt the plan of winter pasturage recommended by Mr. Meech. We hope, however, that his suggestions and liberal proposition will lead to something practical in the improvement of horse breeding in Vermont.

EXTRACTS AND REPLIES.

CRIBBING HORSES.

I wish to inquire through the columns of the FARMER with regard to the cause and cure of cribbing in horses. I have a valuable animal addicted to that habit. JOHN SHERMAN.

Middlebury, Vt., Jan. 18, 1868.

REMARKS.—The causes of crib-biting are variously stated; they are probably, some of the following: want of exercise; imitating other horses; sometimes grows out of the custom of cleaning them near bars or partitions, which the horse lays hold of when he is curried a little too hard; it may grow out of the habit of keeping feed, grain or hay continually before the animal, and the digestive organs becoming impaired; or the habit may be induced by the long-continued impurity of the air in the stable.

The habit of crib-biting occurs among horses of all classes; those that are poorly fed and tended, and those that receive most systematic care; among the young and old; those that work much, and those that work little.

It cannot, we think, be a habit of mere fancy, but springs from some want not supplied, which disturbs the system, and gradually leads to an unrest which settles down into one fixed habit. The premonitory symptoms indicate indigestion, as when the animal is biting a small portion of heated air or gas is frequently eructated. We should consider a "cribber" to be an unsound horse.

What is the cure, you ask? First, a moderate, nutritious diet of good hay, with grain in proportion to the work performed.

Secondly, regularity in feeding, twice or three times in twenty-four hours, and no more given at once than will be eaten with a sharp appetite.

Third, the utmost cleanliness in everything about the animal.

Fourth, have no feeding box attached to the stall, but feed from a box on the floor, and when the horse is done take the box away. Have no timbers or edges of boards within his reach; but smooth surfaces that he cannot well get hold of.

Fifth, let the animal have his freedom on the bare ground occasionally, and place a lump of rock salt in his stall where he can always reach it when there. Each of these will tend to enable the horse's digestion to recover its lost tone.

WORMS IN HORSES.

My horse has been troubled for some time with worms, and in looking over the FARMER for a remedy, I came across one in the paper of Sept. 7, 1867, advising wood ashes, and this having no effect, to use two drachms of *tartarized antimony*. When I went to the druggist, he told me it was the same as *tartar emetic*, and would surely kill my horse, and frightened me from buying. I have used a great many of your receipts and have always found them good, and so I thought I would like to ask you if the druggist was right. Excuse me for the trouble, but I really want to know. He, (the druggist,) said that 15 grains would kill a man.

Haverhill, Mass., Jan., 1868. J. H. BARKER.

REMARKS.—In the FARMER of Sept. 7, 1867, "A Reader," writing from Mansfield, Mass., inquired for an "effectual method of destroying worms in horses?" We replied at some length, and gave as a remedy the use of *wood ashes*, which we had employed for many years with the happiest results, and which we could therefore confidently recommend.

We took pains, however, at the same time to consult the books, and in the best work on the disease of horses, which has ever been published in this or any other country, *Mayhew's Illustrated Horse Doctor*, we found the following:—"Whoever has remarked the dunghill in a knacker's yard has seen it to consist quite as much of *lumbrici* (that is, worms,) as of excrement. *Mr. Woodger, of Bishop's Road, Paddington*, removes these pests with ease and certainty. The above-named veterinary surgeon gives *two drachms of tartarized antimony* with a sufficiency of common mash, as a ball, *every morning*, until the parasites are expelled." This is the exact quotation. Dr. Mayhew's book is the most thorough and humane work on horses that we have ever seen, and his experience with them is probably more extensive and familiar than that of any other man. His work on the *Management of Horses*, and his *Illustrated Horse Doctor*, are warmly commended by the ablest journals in this country and in England and Scotland. There is not a particle of quackery about them. He was placed in the English Horse Guards, we learn, when a boy, where he he evinced such a love for the equine race, and such an aptitude in learning all about it, that he was thoroughly educated, not only in what

appertains to horses, but as a man of letters. If he errs in recommending the remedy in question, Dr. Woodger also errs.

It does not follow that, because 15 grains of tartarized antimony would kill a man, that the same amount would kill a horse! Some things that are poison to men are said to be entirely innocuous when swallowed by dogs. We are glad to notice that what we suggest ourselves, and what we present as the opinion of others, is observed and considered. Under such a course all parties will be quite likely to get at the truth. *Black* antimony is a common remedy for various diseases of horses, and is the crude article, remaining much as it is when taken from the ground.

Still it is well to be cautious in the use of drugs which are not well understood, and we close this article with the judicious remark of Dr. Dadd, who says, "It was customary in former times to give powerful vermifuges for the expulsion of these parasites; but the most rational method is to impart tone to the digestive functions and organs in the use of tonics, stimulants, and alteratives."

FOUR VARIETIES OF APPLES IN ONE.

In reply to the inquiry of Z. A. Gilbert as to how the sweet and sour apples were produced that were raised by Mr. Allen of Greene, Me., I would say that some forty or fifty years ago there lived in my native town, Townshend, Vt., a Mr. T. Sumner, who experimented somewhat in grafting fruit, and succeeded in producing a variety similar to the kind named in the FARMER of Dec. 7. It was produced by taking four varieties of scions, quartering each scion, then taking one-quarter from each variety and putting the four quarters together to form one scion. This bound together and set in the limb produced four varieties in one apple.

Westminster, Vt., Dec. 9. 1867. N. F.

REMARKS.—The fact of there being occasionally different flavors in different parts of an apple is admitted by pomologists. But that it can be produced by the means described by our correspondent is not generally believed. Some years since Solon Robinson, agricultural editor of the *New York Tribune*, offered a reward of $100 for proof that any one had succeeded in producing sweet and sour apples, by uniting buds from sweet and sour trees, but we understand he has not as yet paid over the money to any claimant.

SALMON AND SHAD FOR CONNECTICUT RIVER.

The experiment which has been undertaken by the New Hampshire Commissioners of River Fisheries, of stocking the Connecticut river with salmon, has so far succeeded well. Of the impregnated eggs deposited at the Cold Spring hatching works, at Charlestown, N. H., over ninety-nine per cent. have hatched, and are apparently healthy.

It is the intention of the Commissioners to rear them artificially, till they are ready to go to the sea, which will be a year from next spring. In the fall (1869,) they will return, seeking the sources of the river, and will then weigh, it is estimated, from 3½ to 10 pounds, which weight they will soon double and quadruple. It is hoped before that time, that all obstructions at the mills on the Connecticut river will be removed, and that nothing will prevent the salmon from ascending the river as high as they like.

If the present plans are carried out in regard to stocking this river, a million or more of young salmon will be put in every year, and of such a size that they can safely go to the sea and return; and judging from data obtained by experiments tried in English waters, we are authorized to suppose that, by this means, the productive wealth of the Connecticut river will be increased millions of dollars annually.

Great credit is due in this matter to Dr. Fletcher of Concord, who, out of several that made the experiment, was the only one who succeeded in procuring salmon spawn for the New England rivers. It should be known also, that the merit of this undertaking of obtaining salmon eggs for these rivers, is due to the New Hampshire Commissioners, acting independently, and not to the New England Commissioners, generally, as has been before stated.

Should the promises of the present be only one-half fulfilled, the time will come before long when salmon will be a common article of food, and together with the vast quantity of shad, which are expected in a few years from our rivers, will very perceptibly reduce the cost of living in New England, and enable the poor man to have every day on his table, food that has long ranked with us among expensive luxuries. SALMO.

Charlestown, N. H., Jan. 26, 1868.

TIGHT BARNS.

One of your correspondents is in favor of tight barns for keeping hay, but he says nothing about keeping stock in the same barn with his hay. In some parts of this State, there are many barns where hay is kept and no stock in them; the hay being sold and the land that produced it kept in good heart by applications of fish manure, ashes, guano, poudrette, or some other material, without the aid of barnyard manure. Tight barns in such cases doubtless answer very well, but my experience goes to prove that where cattle are kept in tight barns without ventilation, it is impossible to keep hay in good condition in the winter season. The steam from the breath and exhalations of the cattle will gather in moisture on the hay and cause it to mould, and in fact will so effect the hay before it moulds that cattle, and especially horses, will turn up their noses at it. Barns should be tight enough to keep cattle comfortably warm and still have proper ventilation. Z.

Reading, Mass., Jan. 6, 1868.

SUMMER AND WINTER FEED OF COWS.

Many farmers, I think, might find it for their interest to pasture their cows in winter, and to feed them with hay in summer! I will explain. Several years ago, having turned a newly purchased cow into my yard, the other cows seemed to look upon her as an intruder, not entitled to equal privileges with themselves. Indeed, so great was their antipathy, that it was unsafe to keep them confined in the yard together. This being the case, when I turned them out of the barn, I let them range where they chose in the pasture. Having pursued this course one winter from necessity, and having made up my mind that they were all the better for it in the spring, I have pursued the same course ever since, from choice. This would indeed be inconvenient if one had not a lane leading to the pasture. But many farmers have such a lane, and many more ought to have one. If not used in winter, it would be found to be very convenient in summer. From this experiment and from more general observation, I have become convinced that a sudden change from hay to grass, or from grass to hay is injurious to cows. It is also obvious

that for the largest part of the summer season, they actually suffer in our almost barren pastures, for the want of sufficient food; and considering it bad policy at any time to feed mowing lands; and supposing that when the feed was the best in the pasture that some hay, by way of change, would be beneficial, I have for several years past fed them with hay during the whole of the pasturing season. With this treatment, they are kept uniformly in better flesh, are more healthy, make more butter, and of better quality than when fed in the usual way. B. B.

Derry, N. H., Jan., 1868.

THAT MACHINE—A WOOL DILEMMA.

Will the "Vermonter" alluded to in the FARMER of Jan. 25, who has a machine used for the multifarious purposes of a land roller, a clod crusher, a corn planter, a broadcast seed sower and a grain drill, inform us of his whereabouts and the cost of said machine?

Can you, Mr. Editor, tell those of us who make the raising of wool a specialty, or nearly so, what to do when labor is $25 to $30 per month, as it was last season, and $2.00 per day in haying and harvesting; thereby making the cost of raising wool 75 to 80 cents per pound; whether to hold on, or to let it slide at our highest offer, 40 cents per pound, about one half its actual cost? Be your advice as it may, I subscribe myself, under the circumstances, RETROGRADING.

Fairlee, Vt., Jan. 29, 1868.

REMARKS.—The allusion to the machine was copied from a Vermont paper, and we hope the inventor will respond to the inquiry. Our idea of the wool market is that the stock on hand is rather light and that the tendency of prices appears at present to be rather upward, still we do not feel competent to advise as to the sale. Our correspondent is not the only one who is seriously considering the alternative of "holding on, or letting slide." To some of r ·, however, here in the city, another question is beginning to present itself, —Have we in reality anything either to hold on to, or to let slide? If the misery of "retrograding" loves company, it may be found among those who have not a lock of wool to sell. There are clouds in other horizons than that of the wool grower. It may be well for all of us to trim sails, watch the winds, and look out for "a storm about these days."

A GOOD VARIETY OF CORN.

While husking my corn this fall, I more than once asked myself the question, Why is it that so many farmers will persist in raising corn with kernels so small as scarcely to cover the big cob on which they grow, when by a little pains they might obtain a much better and more profitable sort? I do not think it good policy to raise corn that takes two bushels of ears to make one bushel of shelled corn. I have a variety that I have raised for several years, and have taken considerable pains to improve, and which, I think, is a little ahead of any other kind that has come to my knowledge. It is an eight-rowed variety, kernels very large, and cob very small, fills out entirely over the tip of the ear with large handsome kernels. Many of the stalks produce two good ears. It is quite early; has always escaped being injured by early frosts, even when planted as late as the first week in June. It is the prettiest corn to husk or shell that ever I handled. In husking, the ear readily parts from the stem, even with the lower kernels. After it was all husked out, I shelled one bushel basket of ears, and the product was *twenty-two* quarts of shelled corn, and there is no reason to doubt but that every bushel in the heap will yield equally as well. In short, it gives to me, at any rate, entire satisfaction, and I think very many of the ears this year came as near to perfection as anything that grows in the form of corn. Along with this note I send you a few specimen ears,—not those containing the smallest kernels, of course, nor yet the largest, but between the two. Please first feast your eyes upon them, and then tell me what they lack, if in anything, to make them perfect specimens of that noble grain that you so justly designate as the glory of the New England harvest! In your opinion, to what extent would New England be the gainer if no poorer variety of corn than this should be planted within her borders next spring? Would it not be to the amount of thousands of bushels of this most valuable production of her soil?

Massachusetts, Nov., 1867. I. N. WINCHESTER.

REMARKS.—We have "feasted our eyes" upon your beautiful specimen of the glory of our New England harvest, but do not see as we can improve on your description of it. We have also exhibited it to parties who wish to know your post office address.

DUTCH OR HOLSTEIN CATTLE.

A correspondent at Shelburne, N. H., inquires about the Dutch cattle. I can tell him that I know from my own experience that the cows are *good* milkers, and if he or any other brother farmer who is interested in raising good stock, will call on me and look at a pair of steers which I have that were three years old last summer, and never had any extra keeping, they will, I think, be satisfied that they are "good workers," also.

I have been engaged in farming for more than twenty-five years, but have never raised any stock that, with the same care and expense, would compare favorably with the Dutch in size, form and activity. Their color, too, is generally admired, being black, with a wide white belt around their middle. C. EAMES.

Northborough, Mass., Feb. 3, 1868.

FATAL POISONS AND OTHER REMEDIES FOR LICE.

I never before took up my pen to write a sentence for publication, but when I see such deadly poisons as unguentum and arsenic recommended for killing lice on cattle, I am constrained to write.

Your correspondent, M. M. Tallant, East Concord, N. H., recommends putting in a piece of unguentum under the skin near the ear. It is evident that this poison must be taken into the circulation in order to kill the lice on all parts of the body, in the incredible short space of four days. Your correspondent probably knows that it is dangerous to apply it on the surface, where the animal can lick itself, but if he can only get it under the skin, he regards it as perfectly harmless,—only to the lice. Now let every thinking man decide for himself, whether it is safe to use it or not. There are other things that will kill lice. Kerosene will, but if used freely will blister the skin and the hair will peal off; tobacco wash will kill lice, and I once came very near killing three calves by using it; ashes will rid cattle of lice, but there is danger of its starting the hair; soap and water is good, when the weather is warm, especially for calves; but I think we may take a lesson from nature. Every farmer knows that in summer when cattle have access to sand or loam they will rid themselves of lice,—calves excepted. Now to

imitate nature in this case, we will put a barrel or two of loam into the cellar in the fall, and after the cattle come to the barn, we will take an old dripping pan or other tin or iron dish, and fill it with loam, and after the "gude wife" has done with the stove oven for the day, bake it until morning or until the natural moisture is all evaporated, and we have an article that will dust like ashes. With this dust, your cattle once in a week or two freely, and give them a good chance to rub themselves, and the lice will disappear without danger of injuring your cattle. DEACON.

North Vienna, Me., Jan. 27, 1868.

REMARKS.—We may congratulate ourselves on one effect of the recommendation of the use of these "deadly poisons." It has called out individuals who never before took up their pens to write a sentence for publication, and thus developed talents which ought not to be again "hid in the earth."

ALL HAIL YE FARMERS OF YE LATTER DAY.

Although seventy winters have passed since I made my first appearance on earth, I can not hold my peace. Though with a trembling hand, I must respond to my young friend "G. S.," in the FARMER of Feb. 1. I am made happy when I learn through your worthy paper, taken by my son, J. Baker, that the young farmers are beginning to walk in their own shoes, instead of plodding along in their father's old ones. I think "G. S." is right as to cutting hay. I have proved it by experience. What he says as to barns I know to be correct. I can say, give me a tight barn. I care not if it is lathed and plastered, with good ventilators. I would have the stables so tight that manure never freezes. Keep the stalls well littered with straw or meadow hay, and I will winter a stock of cattle on three-fourths of the amount of fodder that I can with the barn so open that I can thrust my hand between the boards. What folly to let grass stand until it begins to shell. Such hay is nothing more or less, in a word, than small grain and wood.

Go on, young farmers, investigate for yourselves, improve, experiment, and don't give over until you prove to the world that you are masters of your trade, and don't need ministers, lawyers or doctors to lay out your work for you. V. B.

Brookfield, Mass., Feb. 3, 1868.

UNGUENTUM IN THE BLOOD, FOR LICE.

I once assisted an experienced hand to insert unguentum under the skin of a number of calves, as recommended in the FARMER by Mr. Tallant; and in about the number of days that he mentions for the lice to be found dead, the best calf in the lot died, and the lice with him, and the others appeared numb and stiff in their joints for some time after, caused, as we supposed, by the poison. Previous to this cruel act the calves and lice to all appearance were in a thriving, healthy state. Inserting poison enough into the blood which is the life of the animal to kill the lice on the surface of the body is about as consistent as it was for the boy to set fire to the barn to rid it of rats. Both sure remedies, but not advisable. R. M.

Lincoln, Vt., Jan., 1868.

APPLICATION OF MANURES.

While enclosing my subscription I am halting between two opinions; whether to attempt to write a few lines as to my experience in the application of manures, or not to make the attempt. Some advocate, without qualification, the plan of spreading and ploughing it under; others, with equal positiveness, recommend harrowing it in. My idea is that neither system will answer in all cases. On some soils, and with some depths of furrow, it may answer to plough in the manure, but I have known heavy coats almost entirely lost by being ploughed under. But hardly feeling competent to appear on paper, I defer further remarks.

Hyde Park, Vt., Feb., 1868. ORSON HADLEY.

NARROW ROADS.

I have often thought that farmers were not as liberal as they should be in fencing out roads. It is frequently the case that these fences are not more than sixteen to twenty feet apart, which causes the snow to drift into the travelled path, badly. Except for the simple purpose of travelling and repairing, the land fenced off for the road belongs to the farm from which it was taken; and the public has no right to it or to what it produces, except as a passage-way. Until we have no land that does not produce good crops, let us be more liberal, and have wider roads. O. FOSTER.

Tunbridge, Vt., Jan., 1868.

AN EXTRA HEIFER.

I have a pretty little three-year-old heifer that is coming in in April. She gives now four quarts of milk per day, and seven quarts of her milk makes one pound of butter. Her feed is hay and slops from the house, without any provender. If any one has a better heifer will they let us know where she is? P. H.

Milton, Vt., Jan., 1868.

REMARKS.—Probably every reader of the above "honorable mention," will regret that the writer has omitted to state to which breed or race this heifer belongs.

CURE FOR STIFLE.

I have cured two bad cases, by simply dashing cold water on the stifle joint, until it smoked well, and repeated twice. Cover the horse after you shower him. L. H. D.

Cornish, N. H., Jan. 20, 1868.

WHEAT IN HAMPDEN CO., MASS.

The Agricultural Society of this county awarded three premiums on wheat grown in that county last season, at the rate of 25, 37 and 38¼ bushels per acre. The following statements were furnished by the respective competitors, and are copied from the Transactions of the Society:—

On the 28th of September, 1866, I sowed 1½ bushels of wheat on ¾ of an acre of tobacco ground, with the following result:

Cost of seed	$4 50	
1½ bushels of lime	80	
Ploughing and sowing	4 00	
Reaping, binding and carting	5 00	
Threshing with machine, and cleaning	11 00	
Total cost	$25 30	
Result: 23 bushels of wheat at $3		$34 00
1 ton straw		12 00
Profit	$70 70—	$96 00

East Long Meadow, Oct. 1, 1867. L. C. BURT.

The sample I exhibit is a part of 38¼ bushels of Red Mediterranean wheat, grown on an

acre. The previous crop was tobacco that had been manured about five cords to the acre.

Chicopee, Oct. 1, 1867. L. B. CHAPIN.

My wheat crop was grown on a sandy loam, fitted in 1866, for tobacco, with probably eight cords of stable manure per acre. The wheat was sown September 20th, without manure at time of seeding. The land was harrowed well, and rolled after sowing on grass-seed. The result was 25 bushels of superior white wheat per acre for the entire piece of 2 acres less 8 rods, with straw estimated at one ton per acre. Some small portions of the piece winter-killed, and a few small spots lodged so early as to destroy the wheat. I estimate that the best one-half acre yielded at the rate of 35 bushels per acre. As the ground promises several good crops of hay without any additional manure, I estimate that not more than 1½ or 2 cords per acre of the manure in the soil went into the wheat crop.

Five bushels of the wheat produced 193 pounds *very nice* flour, and 110 pounds feed. I charge to wheat crop:

Ploughing 2 acres	$5 00	
Seed 3 bushels at $4.00	12 00	
Sowing and harrowing	2 50	
Harvesting	8 00	
Threshing and cleaning	12 00	
3 cords of manure at $8.00	24 00	
Interest on land	24 00	$87 50
Cr.		
47½ bushels wheat at $3.50	$166 25	
2 tons straw at $12.00	24 00	190 25
		$102 75

I wish to add that I have attempted, during the past six years, three or four times to raise wheat, and this is the first time I have realized even *cost*. Very respectfully yours.

ETHAN BROOKS.

West Springfield, October, 1867.

A SHORT HORN DAIRY.

The following statement of the production of milk and butter by a herd of two pure and eight high grade cows belonging to W. R. Sessions, South Wilbraham, Mass., was made to the Hampden County Agricultural Society, which awarded a premium to Mr. S:—

Two of the herd I offer are pure Shorthorns, and the others high grades. There are three nine years old, four six years, two five years, and one three years. Their milk has been carried to the Wilbraham cheese factory the past summer. The cows averaged twenty-eight pounds of milk a day in May, thirty pounds in June, twenty-eight pounds in July, twenty-four pounds in August, and twenty-three pounds in September. The feed was simply pasture, with the addition of green corn-stalks the last part of the time. On the morning of the 23d of September the milk was tested for butter as follows: weight of milk, 139 pounds; yield of butter, 8½ pounds, of good color and quality—sixteen pounds of milk made a pound of butter.

The following experiments were made with four of these cows previously, in order to test their quality:—

Polly, a grade Shorthorn, now nine years old, calved in February when three years old. The following March she gave 655 pounds of milk and made twenty-seven lbs. of butter on hay alone. At four years old she averaged twenty-two pounds of milk a day for four consecutive months on grass, and an average day's milking, May 16th yielded 1 7-16 pounds of butter.

Daisy, another grade Shorthorn, at four years old, June 26th, gave 34¾ pounds of milk, which made 1¾ pounds of butter, and at that rate of product for three months, by actual weight of milk, on grass alone.

Fairy Bell, a pure Shorthorn, gave at a single milking, on the morning of June 15, 1866, 10¾ pounds of milk, which made seventeen ounces of butter; also on grass.

Beauty, a grade Shorthorn, at four years old, on the morning of May 8th, gave fifteen pounds of milk, which made thirteen ounces of butter. The week following she gave 224 pounds of milk, or an average of thirty-two pounds a day. It is not uncommon for her in the flush of feed to give forty-two and forty-three pounds of milk a day.

On single cows the society awarded the first premium to J. M. Thompson, Springfield, who said: My cow is seven years old, weighs 1320 pounds, and is one-fourth Ayrshire and three-fourths Durham; she calved September 20th, and averaged twenty-five quarts of milk a day up to October 1st. Her feed was grass and six quarts of shorts a day. Last June, on grass feed and seventeen months after calving she gave fifteen quards of milk a day. From the 3d of October to the 12th of November, she averaged thirty quarts of milk a day, and from the 12th of November to December 1st, twenty quarts. Since November 12th she has been kept in the stable and been fed with rowen hay, cornstalks and eight quarts of shorts a day.

The second premium to William Pynchon, Springfield, whose cow is seven-eighths Durham and seven years old. She calved the last of July. Her feed has been grass, corn fodder and rowen hay and she has averaged twenty quarts of milk a day since.

The third premium to A. B. Manley of same town, who made the following statement: My cow is a grade Durham, and nine years old. She made 283 pounds of butter from the 20th of March, 1866, to the same date in 1867, which sold at an average of forty-five cents per pound, or for $127.35. About 548 quarts of new milk were used at the same time in the family, worth at five cents per quart, $49.32; also $40 worth of sour milk were sold at two cents per quart. The calf at three months old

brought $25. She made about a cord and a half of manure worth $9. The total receipts from the cow in the year were therefore $250.67. She was kept in the barn most of the year, and fed, in addition to other things, two quarts of dry meal, night and morning.

IMPROVED STOCK IN CANADA.

Last March, our correspondent, Hiram French, Esq., Eaton, Can., sent us an account of a visit to the farm of H. M. Cochrane, Esq., Compton Centre, published at page 307 monthly FARMER for 1867. Mr. H. now informs us that the Suffolk Punch horse, which Mr. C. had ordered from England, at the time of his visit, arrived too late for service last season. He is described as a beautiful animal of some 1600 to 1700 lbs. Mr. Cochrane also imported last year two-year-old bucks, that weighed 325 lbs. each, last fall, with wool full ten inches in length. Mr. French remarks that an examination of the stock on Mr. Cochrane's farm is more interesting than the exhibition at any Fair he ever attended, and asks us to copy the following article from the Montreal *Gazette*, which he says is correct in every particular.

Mr. M. H. Cochrane has recently made an addition to his already large and superior herd of full-blooded stock, by the importation of a Shorthorn bull of the celebrated "Bates" or "Grand Duchess" blood. It is from the herd of Mr. Samuel Thorne, of Thorndale, N. Y., and cost $3000. This animal is equal to the very best in America. Mr. Cochrane has now over forty head of pure bred or pedigree animals, nearly every one of which has taken first prizes. We are informed upon the best authority that there is but one larger herd of pure bloods in America; namely, that of Mr. Sheldon, of Geneva, N. Y.

In addition to the pure bloods, he has grade animals of superior quality to make up his number to over one hundred. He has also commenced a flock of superior sheep, and has provided barn arrangements for three hundred head.

His farm contains about 700 acres of land, and a considerable portion of it is in a high state of cultivation. Last year, he raised twenty acres of turnips and four acres of mangel-wurtzels, and had a yield of twenty thousand bushels on the twenty-four acres. Also three thousand bushels of coarse grains; three hundred and fifty tons of hay; and one hundred tons of straw; all of which is being consumed by his stock on the premises; and fifteen tons oil-cake in addition. This gives an enormous quantity of rich manure for use on the farm. He also uses several tons of superphosphates every year, principally upon root crops.

His sales of surplus stock last fall amounted to over $7,000. His investments in farm, buildings, stock, &c., amounts thus far to $100,000.

The good influence of so valuable and conspicuous an example, is already beginning to be seen in that section of the Province in an increasing effort on the part of farmers to improve their farms and their stock.

THE DAIRY IN VIRGINIA.

A letter is published in the *Utica Herald* from a gentleman of Herkimer county, N. Y., now on a visit at the South, with special reference to the dairying business. Writing at Abingdon, Va., he says:—

I have examined a number of farms in the vicinity of Abingdon, and if my experience in the dairy business is worth anything, I pronounce them superior in every respect to the lands in Oneida, and may be purchased at one-third the price per acre. Good milch cows may be had for twenty-five dollars apiece, and owing to the clemency of the weather they can be wintered for less than one-third of what it costs in New York. The whole surface of southwest Virginia, which includes all that portion of the State from the Alleghany mountains to the Kentucky line, is formed upon a solid foundation of lime stone. A grass, identical with the famous blue grass of Kentucky, springs spontaneously from the ground, wherever the heavy timber has been severed.

The climate of southwest Virginia is exceedingly uniform and salubrious, the mercury in a Fahrenheit thermometer rarely descending to more than 20 deg. below freezing point in mid-winter, and seldom attaining more than 95 deg. above zero in the hottest days of summer. The robust figures and ruddy features of even the grey haired old men, indicate great health and longevity among the inhabitants.

The people of this pastoral district of Virginia, have extended to me, and all proper northern men, the most polite and generous hospitality. Instead of looking with a jealous eye upon the emigration of men from a more frigid clime, they are universally anxious to promote the material interest of their country, by procuring the introduction of northern capital and skill into their midst.

—English and French writers estimate that during the winter season it will take about two pounds of hay or its equivalent daily to each 100 pounds gross weight of the animal to sustain it, and that the quantity of food consumed above this will go to its increase. The average daily increase in cattle fed for fattening in these two countries is from 1½ to 1¾ pounds.

NITRATE OF SODA.

ANY substance that is used as a fertilizer of the soil, to increase the crops which we cultivate, is worthy the attention of the farmer. It is with manures, as with machinery,—they come in new shapes, and under new names. We receive them with doubts, and test them, as we ought, sparingly, and critically. It would be as absurd to suppose that we have already availed ourselves of *all the fertilizers of the world*, as to suppose that the genius of man has exhausted itself upon the implements and machinery of the farm, and that no further improvements are to be made.

Here, we have under consideration a comparatively new fertilizer of the soil. *We have tested it*, and found it excellent. It is called *nitrate* of *soda*. What is it, and how obtained?

Nitrate of soda, says the *American Cyclopædia*, is found in beds among the hills which skirt the coast of Peru, for an extent of 150 miles, and very generally along the west coast of South America, impregnating the soil with other saline matter, and sometimes forming a thin crust upon the surface, but the only extensive beds known are in Tarapaca, between latitude 19° 30′ and 20° 45′ S., and long. 69° 50′ and 70° 5′ west. The nitrate of soda, as quarried, is very variable in quality, some yielding not more than 25 per cent., and some three times as much of the genuine salt. It is mostly worked with the pick and shovel, but is sometimes so compact that the beds have to be blasted. Portions of the salt are pure white, like loaf sugar, and others are colored reddish brown, lemon yellow, and gray. Its average composition was found by Dr. A. A. Hayes to be as follows:—

Nitrate of Soda	64.98
Sulphate of Soda	3.00
Chloride of Sodium	28.69
Iodic salts	0.63
Shells and Marl	2.60
Total	99.90

Saltpetre, also called *nitre*, is obtained in several ways. In India it is washed out of certain soils; in Europe, large nitre-beds are formed of various kinds of earths, the liquid and dung of stables, and animal matter; these are turned over occasionally, and yield an annual crop of impure *saltpetre*.

Mr. SQUIERS, in his account of Nicaragua, vol. I, p. 384, says,—"the practice of burying in the churches has always prevailed. The consequence is, that the ground within and around the churches has become saturated with the dead. The burials are made for from ten to twenty-five years, at the end of which time *the bones with the earth around them are removed and sold to the manufacturers of nitre!*" These are some of the sources of saltpetre, or nitre. *Soda* is usually obtained from marine vegetables, and in large quantities.

Where sulphuric acid, or oil of vitriol, as it is often called, is poured upon saltpetre and distilled, it makes *nitric acid*, and this last mingled with soda, is called *nitrate of soda*, which is the article of which we wish to speak.

Its use as a manurial agent is of recent origin in this country. The experiments which have been made with it have generally been such as to demonstrate its value, especially when applied as a top-dressing for grass land, wheat, &c.

A late Liverpool paper gives an account of an experiment made with it in the following words:—"On the 6th of May, five alternate ridges of wheat, measuring one acre, two rods and four perches, were sowed with 500 pounds of nitrate of soda. In a few days the difference between the ridges of the same size, could be discerned at a considerable distance from the field, which continued throughout the season. The two sorts were reaped, threshed, and measured separately, and the following is a correct account of the product:—

Nitrate wheat, 48 bushels. Weight per bushel, 56 pounds; straw of the same, 4480 pounds.

Of that part of the field on which no nitrate of soda was applied, the yield was 23 bushels; weight per bushel, 56 pounds; straw of the same 2509 pounds."

In the above experiment the quantity applied was rather large. Had one-half the weight applied been used, the result might have been just as favorable. In using concentrated manures, great care is required to adapt the quantity as nearly as possible, to the actual wants of the crop; as an overdose does no good, and sometimes is injurious. Salt, in moderate quantities, is a potent stimulant, but

when applied in excessive quantities, it proves fatal to most crops.

We would advise our agricultural friends to make a small, but fair trial with *nitrate of soda* on their various crops, and note carefully the results. It will not cost as much as some of the articles now in use, and we have many reasons to believe that it will prove an efficient and paying fertilizer.

MEADOW HAY FOR STOCK.

Once,—some years ago, but still within the memory of some of us,—it was common for some farmers to boast of *how little* fodder they had kept a cow or a pair of oxen upon through the winter! One ton of hay for the cow, two and a half for the oxen, and rather poor at that, they declared, was all that the animals had eaten; and the poor, cadaverous looking "critters," verified the truth of every word uttered. They were gaunt as race horses, lean as Pharaoh's kine, hunch-backed, cross-legged when walking, and strongly inclined to lean against the barn for support when standing up! Is it a wonder that such farmers lived mainly themselves upon salt junk, boiled cabbage and turnips, and starved the minds of their children as they starved their cattle, and thought the warm fireside and good cheer of the bar-room the elysium of bliss?

Well, customs have changed somewhat. Science and art have crept in among us and pushed meadow hay and Holland gin partially out of sight. As the cattle have grown larger and stronger, household comforts and conveniences have become more common. The churches and school houses are better; more books are in the homes of the farmers, and more of his children are qualified to enter upon the theatre of life, and act well their part there. The style and arrangement of dwellings are better; the highways improved; comfortable carriages introduced on the farm, numerous and excellent implements and machines employed, whereby human toil is greatly relieved, and some taste for embellishing the grounds about rural homes, is giving the country a cheerful and attractive aspect.

The days when meadow hay was king are gone by. It is a good thing now, as subject, but not as king. As a *portion* of the feed of young animals, and those producing nothing but their growth, it answers a tolerably good purpose. Let it grow, then, where reclaiming the land would be very costly, and feed it to stock when the appetite is sharp. As animals need variety, it is quite possible that a fodder-ing of meadow hay, which was cut at the proper time, and cured without being injured, may be as useful to them occasionally, as an equal amount of good timothy or red top. We are inclined to think it would, because food has other offices to perform, besides that of merely supplying nutritive qualities.

It is questionable whether even the best kinds of meadow hay can be profitably fed to sheep, otherwise than as a variation of their usual food. Few animals are so fond of variety in their food as sheep. They will frequently leave the succulent clover of rich bottoms, to feed on the parched herbage of sandy plains, and actually thrive better for the change. Besides supporting themselves, it must be remembered that the period of gestation commences about the time when the sheep are folded; and besides sustaining its own wear of carcass, a lamb has to be produced from that feed, which will weigh from four to twelve pounds when dropped, and one-third of the fleece has to be produced during the time they are in winter quarters, which require the best elements of animal producing matter to bring them.

A friend assures us that he used to feed on nothing but meadow hay till the lambs were dropped, for a number of years, but now feeds none, and finds better feed more profitable. This is varied experience, and therefore valuable. If any expect to make sheep husbandry profitable by feeding through winter nothing but meadow hay, they will scarcely realize their expectations. It will be *more profitable* to adopt the plan of our friend above. Give English hay, a little fine meadow hay, a few roots and a little grain. If this course is not found *cheapest* in the result, then the reader may go back to the days when meadow hay was king, and we will expostulate with him no more on the subject!

Calves brought up on meadow hay will be quite likely to make meadow-hay cows, or meadow-hay oxen. As well bring up your children on skim-milk and poor potatoes. That will not do. Generous feeding,—not luxurious,—gives courage and endurance, as

well as bulk. A little investigation will convince that it is poor economy to depend upon poor feed, or upon good feed in insufficient quantity,—and that if we are seeking for profit, we must use good fodder and feed liberally.

For the New England Farmer.

PAYING FOR A FARM.

ONE FARMER'S "STORY."

The call of "C. B. R." for information, awakens emotions of sympathy and feeling in at least one farmer. Having twice paid not only the "two-thirds" of the cost of a farm from the land, but having done about the same as to pay the other third also, I always feel much interest in the those young farmers, who, with limited means, are trying to get or pay for a good farm. Hence I am always ready to do or say what I can to encourage all such in their laudable undertakings. Although the best results of reading, observation and experience combined, would be much better than the simple "story" of "how I did it;" yet I infer from the remarks of "C. B. R." that the *story* is what he wants. This story is nothing very extraordinary; many have done as well, and some better, but if any good will result, it shall be told.

Something over twenty years ago, I found myself in a certain county in Western New York, destitute of means,—I had not even a cow or pig, but had to work out for a living. Having never worked out, and not having had much experience in farm work, I could do but little, at first, more than to keep along, and to live comfortably. But I soon learned how to do better, and began to save a little money. Taking land to plant on shares was a great help. By taking from eight to ten acres, and working out when not at work for myself, I could save about $100 a year. In this way I saved over $300, and bought a small place. There were thirty-one acres in this place, which cost $930,—$330 paid down, running in debt for the rest. This place in due time was paid for, and then sold for $1550. Then bought a larger farm for $3750; paying what money I had, and, as before, running in debt for the balance. Finished paying for this place October 1, 1864; all having been done on the farm, except a little over $600, my share of the property left by my father. But this was not received until it could make no other difference than a question of time. The farm was paid for a little sooner than it otherwise might have been, although this may be offset, in part, by over $400 expended on farm buildings during the time.

But how was it done? By industry, economy, and good, but not the very best management. One important point in my management was such a change of crops as to avoid as much as possible those that had been previously grown, and to depend mostly on crops that had seldom been raised on the land. Thus, the first place had been kept growing wheat until the crop was very light, and the land was said to be run down. Indeed, I was frequently told the place would not support me; that the land was worn out,—with much more to the same import. The land had been let out many years to neighboring farmers, and all the crops grown upon it taken off and nothing returned, and so it did look bad. But the year before I bought, it was well seeded to clover; and as it seldom, if ever, had been in clover, the seed took well,—probably all the better from being sown with oats that were so light as to yield only thirteen bushels per acre. This gave me a good clover lay to start with; and clover and corn were made my main dependence. With a good dressing of plaster on the clover, and plaster and ashes, and what manure I could make, on the corn, with thorough cultivation, these crops were generally good. A good clover lay was plowed for corn, which was followed the next spring with barley or oats, and the land again seeded to clover. This clover was mowed about the first of July, and the second crop saved for seed. The second year it was mowed, or pastured, as needed. Some of the best pieces were planted two years in succession,—the object being to have, each year, about all the corn I could tend with my own labor.

Another point in my management, which was not a little help on this place, was the use of oxen. My practice was to buy a good pair in the fall, winter them on corn fodder and roots, or a little grain, and after the spring's work was done, to sell them. By keeping them in good condition, I was always able to sell for from $20 to $30 more than they cost. This went far, at that time, towards paying for keeping, giving me a team to do my work at very little expense; besides it saved keeping them on pasture during the summer, which was no small item on a small place. And then, as I had no difficulty in getting a team to draw in my crops, by changing work with farmers, I had very little use for a team in the summer. In the fall I again had oxen,—the last few years I kept a horse, which I found very convenient, but not indispensable.

And then to good crops and good management, we added good economy. A great secret in the management of a small place, that many find it hard to understand, is that an industrious man will do all the work himself; consequently there is very little expense or outgo in his farming. In using oxen, the necessary implements and tools need not be numerous nor costly; nor need there be much expense to keep them in order. With such management and such economy, nearly all, besides expense of living, may be saved. We found no difficulty in living comfortably and saving $200 a year on this place.

The other farm was larger, but less than 100 acres. Much the same course of farming

ing was practiced on this place; corn and clover being the main crops. Here, too, the land had been severely cropped with wheat, and badly run. The first year or two, and until I could secure some benefit from clover, I could make but little more than the interest. After this I had no serious trouble. The debt was paid in ten years; and could have been paid in eight years, if it had been all due, or if the money would have been accepted.

Meantime the productiveness of the farm was largely increased, and, until during the last few years, the average has been from fifty to eighty per cent. more than was raised in the same time when I first commenced. This is mainly due to clover, which has been sown at every opportunity. No heavy crops of clover have been plowed under, but a good clover sod, and some growth, say from six to ten inches high, have been secured, if convenient. Never pastured clover in the spring, but saved all the growth that could be obtained to plow under for corn. By surface manuring in the fall, with well rotted manure, the clover would be well started when plowed under in May. I raised a good deal of clover hay, which made rich manure. I found it best to keep but little stock to pasture in the summer, so as to raise as much hay and other forage as possible to feed to make manure in the winter. This manure, largely mixed with straw and the butts of corn stalks, was piled up in the spring, and either applied as above mentioned, or worked into the surface before sowing winter wheat. I found, however, that such manure paid the best when spread on clover in the fall that was to be plowed, in the spring, for corn. In this way I have raised over eighty bushels of shelled corn per acre. I also found that the land was much more benefited by turning under clover, that had been mowed, than that which had been pastured. This appeared to be due to the much larger amount of roots where the clover was allowed to make a full growth, than where kept closely cropped. This was probably owing in part to the fertilizing effects of these roots, when plowed in while in full vigor, and partly to the loosening and ameliorating effects of the long tap roots, in the soil and subsoil.

Until recently I have made nothing by growing wheat. The first year on the place, I put in a few acres after spring crops, and harvested four bushels per acre. A summer fallow gave twelve bushels per acre. I then stopped growing wheat for some years. But during the last few years I have grown good wheat after clover that was mowed early, and a second crop turned under in August; the land being *well prepared* for the seed.

I commenced on this farm with a yoke of oxen and one horse. In a few years I raised a good horse team, and quit oxen. Have had three horses most of the time since. But I found a good lively yoke of oxen much the best and most economical team for a farmer that is largely in debt.

Now I don't see any very serious difficulty in paying one-half or two-thirds for a farm, and doing it all on the land. Three things are necessary,—industry, economy and good farming. The farmer must work, and work steadily. During the busy season he should take no more time for recreation, than is usually taken by a good hired man. In the winter there will be more leisure. But then it is well to try to earn or make a little money. My practice was to secure some work or job by which I could make from $30 to $50 each winter.

There must be good economy. The young man, heavily in debt for his farm, who buys high-priced horses, expensive carriages, with harness and other things to match, including costly apparel, and who frequently takes time to show all these things in riding about the the country, will hardly succeed. It is vastly better to pay for the farm and get these things, if they must be had, afterwards. To do this, there must not only be good economy of time and money, but of all things that can be used to make or save money.

To this economy there may seem to be one exception, and that is, all such farmers should deal liberally with their land. Not only should there be liberal seeding and manuring, but there should be sufficient labor applied to put the soil in the best condition for crops. And while this is done with a liberal hand, the farmer should study to do it judiciously; should see that there is no seed, manure, or labor misapplied, but that all are used to the best advantage. Here, too, is good economy; in fact a great chance for economy. The many small leaks,—with some, perhaps, not so small,—are often among the principal reasons why farmers succeed no better. Hence there should be close study to manage all these matters to the best advantage.

Care should also be taken to adopt a system of farming that will keep the land growing better. It is poor economy to reduce the soil while paying the debt. Many think it must be done; but they are greatly mistaken. Good farming, and the only correct course is, while constantly producing paying crops, to keep the soil constantly improving. By doing this, the farm can be paid for much sooner and easier, and will be much more valuable when this is done.

As "C. B. R." is looking for help and encouragement in the right direction, little need be said as to the benefits of agricultural books and papers. So, hoping that he will find some hints or suggestions in this that will be of use, and that what is here wanting will be supplied from the experience of other farmers, I remain A COMMON FARMER.

Western New York, Feb., 1868.

For the New England Farmer.

CALEDONIA COUNTY, VT., AG'L SOCIETY.

At the Annual Meeting of this Society held at St. Johnsbury, Jan. 21st, the following officers were elected for the year ensuing: President, Harley M. Hall, Burke; Vice Presidents, Chas. A. Sylvester, Barnet, John Bacon, 2d, St. Johnsbury; Secretaries, I. W. Sanborn, Lyndon, T. M. Howard, Elisha May, St. Johnsbury, Chas. E. Parks, Waterford; Treasurer, A. M. Cook, St. Johnsbury,

A committee was appointed to institute a series of meetings within the county for the consideration and discussion of agricultural subjects, at such times and places deemed best by the committee. The idea is to organize a sort of Farmers' Institute within the county for the consideration of all subjects pertaining to the interests of the farmer; and such an one properly conducted cannot but result in good to the agriculturists of the county.

The question of patent manures was discussed to some extent during the afternoon of the session, which resulted in the appointment of a committee to test by chemical analysis the leading commercial fertilizers offered for sale in the county, and report through the press as early as the first of April, next. It was further provided for the appointment of one in each town in the County whose duty it shall be to experiment with the said fertilizers the coming season, with as many crops and on as many kinds of soil as may be practicable, and report the results at the next Annual Meeting of the Society.

The object is, to determine as far as possible, What is the best commercial manure in the market for Caledonia County? and whether they can be made profitable, that is, whether they can be made to pay, at present prices.

This agricultural theorem is an important one; and one which the farmers of the country will be glad to see so practically applied as to read in truth—"Q. E. D." I. W. SANBORN.

Lyndon, Feb. 1, Vt., 1868.

For the New England Farmer.

IMPORTANCE OF MANURES.

The importance of manure to the practical farmer can hardly be over estimated. With its use, good farming begins, and in the neglect to use it, good farming ends. By cultivating a farm without manuring it, the crops are soon diminished in quantity, and the land in value. If this process is long continued the crops will be hardly worth gathering, and the land becomes a barren waste. There is no such thing as successful farming for any great length of time, without the use of manure.

Now, it would seem that an article of such prime necessity would be carefully saved by every farmer; but this is far from being the case. Vast quantities of manure are annually wasted, and what is much worse, a great amount of capital is expended yearly for imported fertilizers. It is easier to save what we have, than to pay for what we buy. It should be a question with every farmer, if manure cannot be manufactured at home cheaper than foreign manures can be imported here. Every farmer is supposed to have cattle, horses, hogs, &c. These, if furnished with the proper materials will make large quantities of manure. Although any way to save and manufacture manure is better than no way at all, yet it is always desirable to adopt the best way.

I once knew a farmer who had plenty of muck on his farm, but he would not draw the muck, for he said it was a great deal easier to buy guano or some other imported manure, than to draw his muck and make it into manure. This was some years ago, and an exhausted farm bears evidence, to this day, that ease obtained in this manner was far from being profitable. The farmer who has muck on his farm ought to use it; it will cost some labor, but it will pay well in the end.

Which is the best method of applying manure is still a contested point. Some farmers bury it in the soil with the plow or harrow, while others prefer spreading it on the surface of the ground. The best results, I think, depend largely on the kind of manure used and the nature of the soil to which it is applied. It is a point of interest to every farmer and each ought to experiment for himself.

I believe that those who use guano and other commercial manures would do a kindness to farmers in general, if they would give, through the columns of the agricultural papers, the result of their use. If it is profitable to use them, every farmer ought to know it; while if not profitable, the experience of those who have used them may save trouble and loss to those who have not. I presume the editors would gladly give the result of any well-conducted experiment in this department of farming; and certainly farmers ought to "*do good and communicate.*" O. T.

Lakeville, Mass., Jan. 20, 1868.

HORSE RACING AT ILL. STATE FAIR.

We published last week the vote of the Board of Directors of the Illinois State Agricultural Society abolishing racing at the coming Fair. The following comments on this decision are copied from the *Prairie Farmer*, published at Chicago:—

From time immemorial there have existed two parties upon the question of trials of speed at our agricultural fairs. On the one side have been arrayed those who look upon racing as a legitimate pastime, resulting in the amusement of the people and improvement of the equine stock of the country, the jockeys, the gamblers, who wish to gain by the sport, and the large crowd of spectators who love the excitement of the race.

On the other side we have had that large class of the community, who have had all their moral feelings outraged by association with the gamblers, pick-pockets, and bruisers that the race course in this country is almost sure to attract to its exhibitions, and by the open practices of gambling, betting, &c., that form the chief business of such characters upon these occasions.

It has been argued on the one hand that there was a demand for the race on the part of the great mass of fair attendants and that there could be no financial success without it; that the fair without the horse race, would be a dull, stupid affair; that the public would not attend and that its discontinuance would result in the breaking up of those annual gatherings that have resulted in so much good to the country in so many ways. Upon the other hand, the argument has been that the race track, with its concomitants has been the means of driving the moral portion of the people from our fair grounds and thus cut off receipts at the gates, while it has tended to turn the attention of the Society to the encouragement of one class of animals and one class of amusements to the detriment of other branches of industry that the Society is bound to foster and encourage.

Having long acted in accordance with the views of the first mentioned class, the Society has now determined to show a proper deference to the advocates of purely agricultural and mechanical exhibitions, and by resolution, at the late meeting of the Board, prohibits all trials of speed, by *racing*, at the fair of 1868.

By a very large number of our enterprising farmers, this act of the Executive Board will be received with great favor, and if their former statements were made in good faith, we shall see exhibitors at our next fair whose faces have not greeted us for years. We are glad of the decision of the Society, for we can now have the vexed question settled whether the people will support a fair without the usual attraction that has been offered by the race track. If they do not, then it remains to be seen if the pastime cannot be stripped of its disgusting and revolting features, and thus be allowed to add its attractions to our fairs; at any rate, we look upon the act of the Society as the beginning of a great reform in racing practices at our fairs.

How to Build a Corn Crib.—I have one that has stood for twenty years, and has never had a rat, and but one mouse in it to my knowledge. Posts 10 or 11 feet long and eight inches square; mortice 2 feet from one end; for side and end sills, 2-inch mortice with tusk. Taper post from sill to the end by hewing off inside until the end is reduced to four inches diameter; make smooth with draw knife, and nail on tin smooth half way to the end, below the sill. Let sills be eight inches square; also, end tie them and the rafter plates strong with moderate inter-ties. Brace well, and lath up and down with three-quarter inch lath; dovetail or countersink joists cross-wise; lay the floor, and board up the ends with ungrooved boards; let each bent be 12 feet long, 6 feet wide at the sill, and 7½ feet at plate, with 1½ feet floor, and if full to peak, it will hold 250 bushels. I never had an ear to hurt on account of the great width. If preferred, lay the floor with lath or narrow boards, with room for ventilation. Each post should stand on stone, about three inches from the ground, and each stone have a foundation two feet square and below the frost.—*J. S. Keith, Newton, Pa., in N. Y. Tribune.*

HOW WE KEEP OUR HENS.

We keep about fifty hens and four cocks. Our hen house is twenty feet long, ten feet wide, and ten feet high in front, with sloping roof, two windows on the west, and one long window on the south, across the whole end, swinging inward. Under the front windows are the boxes for the nests, made as seclusive as they can be, for a hen is as shy and retiring before she lays as she is bold and noisy after. Under the roosts a shelf catches the droppings. These are gathered every few days, and saved for the garden, and the shelf each time covered with ashes or lime. We whitewash inside and outside. On the south side of the house a yard is fenced in under apple trees, twenty by fifty feet. The earth at the bottom of the house, when frozen, is swept every day, and at other times is shoveled out often, and renewed with fresh earth. A large box, with fine coal ashes or wood ashes, is placed in a corner for a bath, and is often renewed. No food is given in the house which can sour the ground, and when such is given in the yard, like scraps from the kitchen, the earth is often taken out and renewed. A lime or oil wash is occasionally used on the roosts. The house is shut up pretty closely on very cold nights, (always the passage-way into the yard open,) but is often opened and ventilated. In weather not too cold the windows are left up and the door open, and the fowls are encouraged by the manner of feeding to roam away from their house about our place, but this in even moderately cold weather they are always reluctant to do, and invariably go back to their house in a few minutes, or huddle together in some warm, sunny place in a shed. There is nothing fowls like so well in cold weather as a sheltered place, where they can have a sun bath, and even in summer they seem to take great delight in wallowing in a sand bank under a blazing sun. We give them plenty of fresh water and pure food.

Now there is nothing very peculiar about this manner of treatment, into which, from habit, we have gradually settled, except in its results. We have lost one hen, found in the yard dead without apparent cause, but probably from apoplexy, to which they are subject, and otherwise than this we have not had a sick fowl in our whole flock from any cause during the whole fall and winter. The simplest medicines work the most wonderful cures, and we have always thought the simplest treatment of fowls the most profitable and successful, and we have had all kinds of

experience in the matter, not omitting the most expensive and profitless.—*Ruralist, in Country Gent.*

GOODHUE, MINN., FARMERS' CLUB.

A correspondent informs us that on a prairie 10 to 14 miles south of Red Wing, Minnesota, which a few years ago belonged to the Sioux Indians, there is now a "Farmers' Club" of over 100 members, with a library of over 200 volumes, furnished also with the leading agricultural and some other papers, where the "NEW ENGLAND FARMER, among others, is read by many a rough, but industrious and intellectual farmer of Eastern extraction, on Tuesday evening of each week."

The New England family that locates on a Western prairie needs advice and sympathy. Everything is new—the climate, the soil, the vegetables and the animals. The sun, moon and stars have a Western look. Even the wind that whistles around the cabin has its peculiarities. The neighbors may greet such a family with much cordiality, but still how lonesome they often feel!

Here is a grand field for a farmers' club, and we are glad to know that at least one such association improves it well. Our correspondent informs us that the Goodhue Farmers' Club furnishes each new settler with garden seeds, currant and gooseberry bushes, strawberry plants for a large garden bed, one vine each of the Concord and Hartford prolific grapes, with a lot of grape wood of several varieties. If unable to procure his seed wheat, potatoes, corn, oats, &c., he is furnished with them and then pays for them from the proceeds of his second crop. He has access to the library and reading room.

From statistics collected by this club, it appears that while the average yield of wheat for the whole State is put at thirteen bushels per acre, the average of this settlement, which has 7640 acres under cultivation, was 19.8 bushels per acre, the past year, on old ground. They raised 143,040 bushels of grain this last season. With harvest hands at $4.00 per day, $3.50 for team work, $2.00 per bushel for seed wheat, 12c per bushel for hauling to market, 7c per bushel for threshing, besides "finding" or keeping teams and men, and our own work at $2 per day, our Field Account, says our correspondent, shows a net profit of $14 per acre. Large farm houses, commodious barns, cattle sheds, substantial granaries and out buildings, well cultivated fields, good fences, well built school houses, three churches, tell of the fruitfulness of our soil. During the last season a large number of new farms were opened, some of 40 and some of 160 acres in extent.

We hope to hear again from our correspondent, who is also Secretary of the Goodhue Farmers' Club.

SUFFOLK HOGS.

Henry Cobb, Esq., of Amherst, Mass., furnishes the following statement of the weights of five hogs of this breed fed upon his farm the past season:—

	Live weight.	*Live weight.*	*Dressed weight.*
Hog No. 1.	Oct. 16, 354 lbs.	Jan. 7, 519 lbs.	454 lbs.
" " 2.	Oct. 16, 348 "	Jan. 7, 492 "	432 "
" " 3.	Nov. 13, 211 "	Jan. 14, 352 "	300 "
Two Pigs	Oct. 16, 146 "	Jan. 14, 355 "	304 "

One of these pigs, cut up for home use, weighed 147 lbs; head, without cheeks, 6¾ lbs; feet 1¾ lbs.

Mr. Cobb obtained his stock originally of Mr. Stickney, and has taken much pains to keep it pure. Instead of deteriorating in his hands, he believes it has gradually improved until fully up to the Prince Albert standard. He fully endorses the commendation of the Suffolk in a late number of the *Stock Journal*, which says:—

"On the whole, there is no better breed in the country than the improved 'Suffolk.' They are a well-formed, compact, short-legged, hardy animal, equal in point of value to the best of the 'Essex' and superior in condition, and consequently better adapted for general keep, and especially for the cottager. Mr. Stickney, of Massachusetts, one of the first importers, deserves the credit of assisting the 'Suffolk' to the reputation which they have attained in this country."

Mr. Cobb alludes to a favorable account in the Amherst *Express*, copied from an Illinois paper, of the Suffolk breed in that State, but objects to the recommendation of the writer to cross them with the Berkshire. He thinks that the crossing of thorough bred swine results as unfavorably as in the case of horses and cattle. He is fully satisfied with his improved Suffolk, and is not willing to risk the loss of any of its good qualities by mixing with any other race.

His figures certainly show that he has a superior breed, as well as a most "excellent pail."

— The receipts of the N. Y. State Agricultural Society, during the past year, were $40,587.99, and the expenditures $27,637.48.

For the New England Farmer.

APPLICATION OF MANURE.

Many farmers have a prejudice against spreading manure and exposing it for any length of time on the surface of the ground. They believe a large portion of the value of barn manure is lost by evaporation if not covered by the soil. Others contend that little, if any, loss is sustained by the practice of surface manuring.

Several experiments made within a few years have inclined me to favor top dressing and surface manuring whenever circumstances seem to require it,—as, for instance, when the ground freezes up early in the fall, and you do not have time to haul out and work in all your manure as you desired. If I were caught in that way now, and had a lot of summer manure on hand, I would keep carting and spreading just as if the ground were not frozen. I would not put it in heaps large or small, but would spread it, all ready to be cultivated in at the first seasonable moment.

Last winter after the manure in the barn cellar became somewhat in the way, I carted out some dozen loads and spread it on about four inches of snow over a part of a field that was intended for potatoes. The remainder of the field was manured in the spring with the same kind of manure and as near as might be with the same quantity. The field was all cultivated and worked alike after the manure was spread. At no time during the growth of the potatoes could the least difference be noticed between that part manured the day it was worked into the soil, and the other part where the manure lay exposed several months.

I do not suppose the manure that was spread in the winter if taken up again in the spring and used to manure some other land would have been as good as that drawn directly from the yard. I suppose what it had lost the ground had taken and kept till the growing crops should call for it.

The fall previous, I hauled out several loads and left it in small heaps of about a quarter of a load each, to be spread in the spring on land intended for grass. The result of that experiment was that where the heaps lay all winter the grass was very early and heavy, and needed cutting many days before the rest of the lot, making the field look very uneven. I had to cut it when the early spots were grown or that part would have lodged and rotted before the other part would have been ready to cut.

I think, of all modes of disposing of manure, that of leaving it in heaps through the winter is the worst.

If manure can be left spread on the surface of the fields where it is to be used, without losing its strength only as the ground takes it, it is worth knowing. And now is the time for all who have manure on hand, that is in the way, and have tolerably level land on which to use it, to draw it out while the ground is frozen and the men and teams comparatively little to do. To most farmers, a day's time in April is worth two in January.

For top dressing grass, I have found the best time to be immediately after taking off the hay. On land suitable to top dress at all, the grass will usually grow up in a few days and completely shade the manure, keeping it moist so that every shower can carry down to the grass roots some portion of the value of the manure.

A. W. CHEEVER.

Sheldonville, Jan. 15, 1868.

For the New England Farmer.

METEOROLOGICAL RECORD.

These observations are taken for and under the direction of the Smithsonian Institution. The dash after figures indicates below zero.

	Oct. 1867.	Nov. 1867	Dec. 1867.	Jan. 1868.
Av. temp're	48°	35°	17°	1-°
" midday "	57°	40°	23°	25°
Coldest day	24th 36°	19th 11°	12th 5°-	13th 5°
Warmest "	18th 63°	11th 55°	27th 37°	24th 31°
Coldest mrn	—	—	11th 16°-	14th 9°-
R'ge of temp.	25 to 75°	4 to 55°	16- to 44°	9- to 30°
Bar. av. h'gt	29.30°	29.2.°	29.28°	29.26°
Hg't daily av.	29.58°	29.53°	29.69°	29.58°
Lowest " "	28.94°	28 78°	28.85°	28.77°
Range merc.	28.83 to 29.71°	28.51 to 29 5°	28.67 to 29.70°	28.54 to 29.69°
Stormy days	8	9	11	8
Inches rain	3.67	—	—	—
" snow	—	5.50	12.75	26.50
R'n &mel'd "	3.67inch's	2.42inch's	1.85 inches	2.65 inches
No. clear dys	2	0	0	3
" ent'y cld'y	3	6	1	9

OCTOBER.—An exceedingly pleasant business month. Weather in every respect remarkably similar to that of same month last year.

The average temperature of October, 1866, was 48°; do. midday 58. There were seven stormy days with 3.30 inches of rain, one snow squall, two clear days, and five days of total cloudiness.

NOVEMBER.—An early closing in of winter especially distinguishes this autumn from the last—the weather all through being decidedly colder with but little rain.

The average temperature of November, 1866, was 38°, do. midday 44°. There were six stormy days, with 1 inch of snow and 1.15 inches of rain and melted snow; no clear days, and three days of total cloudiness and rain.

DECEMBER.—This was one of the coldest months on record. Such a "spell" of zero weather as occurred from the 8th to the 15th has not been known since Dec., 1835. In the latter part of the month the cold was moderate. Little snow fell; with almost no sleighing. This record contrasts remarkably with that for same month last year.

The average temperature of December, 1867, was 24°, do. at midday 30°. There were no entirely clear days. Eleven stormy days, with 19.00 inches of snow and 4.73 inches

of rain and melted snow; two clear days, and two days of total cloudiness.

JANUARY, 1868.—A remarkably moderate, comfortable month. No thaw nor any material softening of the snow during the entire time. One of the best seasons for sledding known for several years. The "January thaw" did not come off according to appointment, but may be expected any day, and will be very welcome to many householders.

The average temperature of January, 1867, was 12°, do. at midday 18°. Eight stormy days, with 17.50 inches of snow and 1.85 inches of rain and melted snow; two clear days, and five days of total cloudiness.

For the New England Farmer.

DUTCH COWS AND OXEN.

Mr. EDITOR:—It gives me pleasure to look back and reflect that within the last seven years, I have been instrumental in saving a number of heifer calves from the knife of the butcher that were descendents of Mr. Chenery's Dutch Stock. The most of them have made first-rate milkers. The cow that I now propose to speak of is the most extraordinary heifer that I ever was acquainted with, excepting one native by the name of Nonesuch which was frequently exhibited at the Middlesex agricultural fairs. Before this Dutch heifer dropped her first calf, I noticed, one morning, that her bag was so large that it was chafed on both sides by walking in the pasture. She was then milked clean, giving a common Quaker pail running over full of milk. She was milked every day for four days, and on the fourth day gave a pail full and two quarts over. She was then milked twice a day and her milk measured, and amounted to eighteen quarts a day. After she dropped her first calf, she gave a good mess of milk more that her calf would take, and on the day that her calf was three weeks old, what it would not take measured eleven quarts. I then sold her to Mr. Jones Emerson, proprietor of the Medford House, for $150, reserving the calf for myself. I shall leave Mr. Emerson to make his own statement, of what she has done since. One of my neighbors told me he had seen her within a week. Within a few days she had dropped her third calf; and he regarded her as the best specimen of a cow he had ever put his eye on, and thought her to be worth $300.

As the Medford House stands about three rods from the horse railroad, I think some of the lovers of good cattle would be well paid by taking a ride either in the cars or in a sleigh and taking a look at this noble cow.

Last summer I sold two three-year-olds of the same breed to Mr. Wm. Jaques of the Ten Hills Farm in Somerville. I sold one two-year-old, after dropping her first calf, to Mr. Duren, living the west side of Woburn. Since then, Mr. Duren has told me that some of his neighbors thought she might be three years, and others that she might be four years old; but I know she is only two years old last spring.

As the Dutch breed are not much known for oxen I wish to say one word concerning them. Five years ago last spring, I raised a bull calf of the Dutch breed, and bought a mate for him of Mr. Chenery. They were broken to the yoke very young. I kept them till last April, when they were five years old. I considered them the very best cattle of their age and weight. I sold them to John Cummings, Esq. of Woburn for $300. I have never heard Mr. Cummings say one word for or against the cattle since he bought them. I looked them over a few weeks ago and knowing the hard work they did last summer and seeing how they had grown, and knowing that Mr. Cummings always keeps oxen for hard work, I made up my mind that he could not better himself by selling them for $500. ASA G. SHELDON.

Wilmington, Mass., Feb. 2, 1868.

For the New England Farmer.

SHEEP HUSBANDRY.

BY JOHN DIMON, OF POMFRET, CONN.

This being a stormy day, and having spent a portion of it with my sheep, I very naturally take sheep for my subject.

I am aware that sheep are a little unpopular just now, and that wool and mutton are low. But nevertheless, brother farmers, I think we had best keep a few woolly backs, and I think we shall not find it altogether unprofitable to do so. I will also tell you my plan of managing them, which, by the by, I do not claim to be the best way, but is the best I know at present.

I begin by selecting in the summer or fall, ewes of vigorous constitution, wide hipped, short-legged, early maturing animals, culled from the common flocks of the country, and have a *good* South Down buck which is turned with them as early as the 10th or 15th of September. They should have *good* pasturage; or, if you cannot give them this, feed them with a little grain, and keep them in good condition through the fall and winter, but do not get them too fat. Keep them through the winter by themselves, away from cattle and other stock. Have a variety of fodder provided for winter feeding, such as clover hay, rowen, corn stalks, and last, though by no means least, a good supply, when convenient, of good well cured weeds. Horse wormwood, when cut at the right time and properly cured and housed, is worth more, ton for ton, for sheep than good English hay. However, I like to have both, as it is very essential that sheep, as well as other stock, have a change of fodder. I give ewe sheep grain every day, during the winter. If you have proper accommodations for sheep, they require as little care, during the winter, as any other stock; but

they do require to be fed regularly, and to be kept dry, but not too much confined.

Lambs.

When your sheep commence lambing,—if in February, March, or April,—then they require great care, as by neglecting them then you lose the profit on the flock for the year. When the lambs are about three weeks old they will commence eating a little meal sprinkled in a trough, in a separate pen, with an opening too small to admit their dams. I usually feed oil meal. At first, they should be allowed but little; increase gradually until at twelve to fifteen weeks old they will eat a quart of oats and corn, or oil meal, each, per day, when they will have attained sufficient weight and maturity for the butchers,—weighing ten to twelve lbs. per quarter, and will always sell readily for the best price. They should be all sold and closed up certainly by July 4th. The ewes should be sheared early—by June 1st—and fattened after the lambs are taken off, and sold early, at a good profit, before our markets are flooded with mutton and late lambs,—thus closing the account within the year and be ready to start again.

Let your buck be a good one. Better pay $50 for a *good* South Down buck than have an ordinary one given you, if you have from twenty-five to fifty ewes. When you get one that is just right, keep him as long as he remains just right.

The above is a practical view of sheep husbandry, as practiced by myself, with a part of my sheep. I have sheep, however, that I do not sell to the butchers until they are old. I always raise a few of my best thoroughbred South Down ewe lambs.

Shearing.

This should always be done early, say the last of May or the first of June. It is better to shear early and house the sheep a few nights, especially if they are ticky, than to let them carry the fleece too late. Shearing should always be done by a workman,—by a man who understands his business, especially if the sheep are intended for exhibition.

Salting.

Sheep should have free access to salt, mixed with one part sulphur to three of salt at all times, both winter and summer. I am, of course, referring to sheep kept back in the country, away from the salt water and salt hay. Sulphur with the salt has a tendency to keep sheep free from ticks, and healthy.

South Downs.

For raising lambs for market, and for mutton sheep generally, I prefer the South Downs and their crosses to any other breed. I believe them to be the best for that purpose, and will pay the best for feed consumed. They are a quiet breed, and the ewes are good nurses and great milkers. Aside from this, they are, in my opinion, decidedly the handsomest breed in the world. For a definite description of South Downs and other breeds, and for the general management of sheep, I refer all who may read this to "The Practical Shepherd," by H. S. Randall. This is a book that every man who keeps ten or more sheep should possess, and should look at every month in the year.

I purpose giving you my views on stall feeding, &c., but will defer it now for fear of spinning my yarn too long.

Pomfret, Conn., Jan. 21, 1868.

THE ROBIN.

We have been requested to publish the following by one of our subscribers, who says the robins last year took almost his entire crop of Honey and Black Heart cherries, some four or five bushels, a large share of his strawberries and peas, and injured his Bartlett pears. The article is an extract from the report of E. W. Lincoln, Secretary of the Worcester County, Mass., Horticultural Society. After referring to the recent assertion of a naturalist, that the robin has got his bad reputation among fruit growers because his destruction of insects is carried on so early in the morning, the writer says:—

"He has beheld the very finest specimens of the strawberry and raspberry, in the development and exhibition of which he anticipated more pleasure than from their consumption, disappear down the instatiate maw of these statutory pets. Quite recently, before sunrise, when they ought to have been diligently occupied in works of matutinal usefulness, he has startled them, in the great flocks into which they gather before migration, from his Bartlett pears, where they had been presenting their bills and impressing their private stamp without Federal or proprietary license. But he prefers rather to rely upon the evidence of His Excellency the Governor, the commander-in-chief of an army and navy that yet was inadequate to save his pears; upon the testimony of ex-Gov. Lincoln, whose strawberries were sedulously tended, and when ripening were summarily stripped; upon Messrs. John C. Ripley, George Jaques, O. B. Hadwen and J. Henry Hill, gentlemen deservedly high in your confidence and in that of the public, who all concur in the opinion that the robin is an incorrigible thief, and an unmitigated nuisance. Gentlemen are they, also, of refined sensibilities, to whom the song of birds is as joyous as to those whose exquisite tenderness is wounded by the proposed outlawry of a single variety of the feathered race. Members of this society are constantly testing new discoveries in pomology, as much for the public benefit as for their private enjoyment. Their labor will be utterly nugatory, if its fruit is to be subject to legalized

depredation. Your secretary would advise that the society address a memorial to the General Court, asking for a repeal of all laws that protect the American robin, or their amendment so far at least as to allow individuals to shoot them upon their own premises."

IMMORALITY AT AG'L FAIRS.

There was much complaint last fall of the gambling, pool-selling, drinking and other immoral and vicious practices which were permitted at and about the agricultural fairs in many parts of the country. We are glad to see that something beside expressing regret for these vicious attendants of our County and State Shows is likely to be done, in one county at least. The action of the grand jury of Dutchess County, N. Y., in presenting the following indictment, will, we hope, inspire the leading men in other places with courage enough to attempt a reform in this respect.

"We, the Grand Jury of the County of Dutchess, empanelled and sworn at the present term of the Court of Oyer and Terminer for said county, do present that the allowance of gambling and liquor selling at stands and in booths around the grounds where the Fair of the Dutchess County Agricultural Society is held, is productive of such vicious and criminal practices as to call for enegetic interference by the public authorities of the county. That the owners or occupants of the fair grounds, and the land adjoining them, have for several years been accustomed to letting such ground during the fair to unknown and irresponsible persons from distant places, who, at the stands and in the booths erected thereon, have carried on an unrestricted sale of intoxicating liquors, together with gambling and other infamous practices, which have grown from bad to worse, until they have become so criminal and shameless (as at our last County Fair) that we are surprised that no citizen, among the thousands present, could be found to cause the arrest of the guilty parties.

These and other immoral and vicious practices at and about said fair, have been the cause of drawing thither a crowd of vile and abandoned characters from our own and other counties, whose presence there has rendered life and property practically unprotected. So great has this evil grown that our County Fair, with its attendants, has become a disgrace to our county and a public nuisance, especially to all decent and law-abiding citizens. The commencement of our County Fair is but the inauguration for four or five days of a carnival of vice and crime and lawlessness, of so shameless and outrageous a character as to disgrace even a semi-civilized community. We regret that the want of evidence as to the identity of the guilty parties, and of the complicity with them of other well-known parties, prevents us from presenting them for trial by indictment, and we, therefore, take this method of expressing our condemnation of the practices alluded to, and of censuring, in the severest possible terms, those parties residing in our own county, who aid and abet them, and who, for the purpose of gain, let the fair grounds and the premises about them for the purpose alluded to. We are compelled, by the solemn obligation of the oaths that we have taken, to make this presentment, and we respectfully ask that it may be entered on the minutes of the court".

A WATER FOUNTAIN FOR POULTRY.

The above is a somewhat faulty representation of a contrivance for supplying poultry with water on a principle much like that on which the inkstand on the desk before us operates. The cut is intended to represent a common jug set in a pan or dish a trifle larger in circumference than the jug. The jug is filled or partly filled with water, and tightly corked. A small perforation is made in the bottom of the jug, through which the water gradually flows into the dish or pan in which it is placed, so as to secure a fresh and constant supply for the poultry. The same object may be obtained by the use of a glass bottle filled with water and supported in an erect position, with the neck or nozzle near the bottom of a dish or trough, beneath the surface of the water.

GRAPE ROT.—From a careful examination of the history of grape culture from the earliest ages, together with the analysis of the best grape soils, I am convinced that the disease has its remote cause in a want of certain natural combinations of the elements of the soil and subsoil, more or less influenced by meteorological phenomena and other causes referred to.

In all countries where volcanic deposits predominate in the soil, the grape is healthy. Now, by chemical analysis, we can certainly ascertain the components of the soil, and by composting manures, supply, in a great measure any deficiency that may exist—yet we can no more make a soil as it is in the volcanic districts direct from Nature's great laboratory, than we can take charcoal and mould a diamond, or form the gossamer fibre of the cotton plant. We may greatly simulate Nature—and in so much as we do, we will in the same proportion diminish the disease in any district, making all due allowance for unhealthy vines and meteorological influences, which may one

year favor the development of the disease and another prevent it.—*E. M. Walker, M. D., Gonzales County, Texas, in Rural World.*

From the Cornhill Magazine.

SPRING.

Here, where the tall plantation firs
Slope to the river, down the hill,
Strange impulses, like vernal stirs,
Have made me wander at their will.

I see, with half attentive eyes,
The buds and flowers that mark the Spring,
And Nature's myriad prophecies
Of what the summer's suns will bring.

For every sense I find delight—
The new-wed cushat's murmurous tones,
Young blossoms bursting into light,
And the rich odor of the cones.

The larch, with tassels purple pink,
Whispers like distant, falling brooks;
And su r-forgotten dewdrops wink
Amid the grass in shady nooks.

The breeze, that hangs round every bush,
Steals sweetness from the tender shoots,
With here and there a perfumed gush
From violets among the roots.

See, where, behind the ivied rock,
Grow drifts of white anemones;
As if the Spring, in Winter's mock,
Were mimicking his snows with these.

The single bloom yon furzes bear
Gleams like the fiery planet Mars;
The creamy primroses appear
In galaxies of vernal stars.

And, grouped in Pleiad clusters round,
Lent-lilies blow—some six or seven;
With blossom-constellations crowned,
This quiet nook resembles heaven.

THE LABOR QUESTION.

WHAT A HIRED MAN SAYS.—A man in Herkimer County, N. Y., writes as follows to the New York Farmers' Club:—

I work by the month in the summer, and by the day in winter, and make the most this way. I find that the less I know and the less I do on my own responsibility the better satisfaction I give. I have tried always to suit, but I find you do not want your hired men to know any more than your horses, though we are expected to behave better sometimes. There seems to be a sort of pride growing up among you to have a young man start in the morning and have no idea what he is going to do till he gets on the spot. The first season I got $32 a month, while a big Irishman got $35, though he could not run any kind of machine, or drive a team decently, but he had an abundance of muscle, and that was all that was wanted. If you want intelligent help you must pay for it. Again, you all complain that your hands do not take any interest in your work. This is true, but how can it be otherwise when you want to get as much work out of us as possible? For instance, a certain farmer, nearly through haying, told his men that they must rush through before night. All went to work with a will, each exerted himself to the utmost, and when the last forkful went over the beam, a cheer from the men proclaimed that haying was done at four o'clock Saturday afternoon. When the cheer was hushed the voice of the employer was heard telling the men to take the teams and haul out manure. There was not much interest in the work after that. Now, if you want your men to have an interest in things, treat them as men, and while at work as companions; let them know why a thing is done so and so, and many a blunder which you think arises from stupidity will be avoided.

AGRICULTURAL SOCIETIES.

STOCK BREEDERS' ASSOCIATION.—The Association of Breeders of Thorough-bred Neat Stock held its annual meeting at Springfield, Mass., on the 12th inst., and elected the following officers:—President—E. H. Hyde, of Stafford, Ct. Vice Presidents—J. F. Anderson of South Windham, Me., J. O. Sheldon of Geneva, N. Y., Burdett Loomis of Suffield, Ct., J. W. Freeman of Troy, N. Y., and E. D. Pierce of East Providence, R. I. Secretary—J. N. Bagg of West Springfield. Treasurer—H. M. Sessions of South Wilbraham.

Ayrshire and Hereford Com.—George B. Loring of Salem, H. S. Collins of Collinsville, Ct., and William Birnie of Springfield.

Devon Com.—H. M. Sessions of South Wilbraham, B. H. Andrews of Waterbury, Ct., and E. H. Hyde of Stafford, Ct.

Alderney Com.—Jno. Brooks of Princeton, O. B. Hadwin of Worcester, and James Thompson of Nantucket.

After the meeting, the Devon, Ayrshire and Alderney Committees had a session over their respective herd books,—now nearly completed and soon to be published,—and cleared up some of the knotty points in pedigrees.

MAINE STATE AGRICULTURAL SOCIETY.—President—Seth Scammon, Scarboro'. Secretary—S. L. Boardman, Augusta. Treasurer—Wm. S. Badger, Augusta. Trustees—Geo. W. Ricker, Seward Dill.

WOODSTOCK, CONN., AGRICULTURAL SOCIETY.—President—Oliver H. Perry. Vice President—Wm. I. Bartholomew. Recording Secretary—John Dimon. Treasurer—Samuel M. Fenner.

DECAY OF MAPLE TREES.

A correspondent of the *Ohio Farmer* assumes that maple trees in that State are more rapidly failing than other forest trees, and says that since tapping with a bit has been practiced, maple trees have died faster than ever before. Is this tree of the maple orchards of New England? This writer says:—

When an incision is made into the sap-wood only, it will heal up, but when made deeper, it never will, and all the adjacent parts will die, and often decay. Now, in proof of this, let any farmer examine two maples that have been tapped for a dozen or more years—one with the bit and the other with an axe or gouge—the cuts by the latter not made beyond the sap-flowing wood. The inner wood of the former and much of the surface will be found

dead, while the other, where it has sufficient time for healing, will be found to have formed a perfect gnarl, so tough and sound that it will be next to impossible to split a log of it, stove-wood length. Another proof of this may be made by noting the difference in the decrease of maples in different sugar orchards where the two modes have been practiced.

When a tree is tapped with a bit, the spile stops up the best flowing grains. When an incision is made with a large auger or gouge, more grains are opened, and of course a greater flow of sap obtained. It is a fact, however, that when trees are tapped in this way, the wind dries up the wood sooner than when a bit is used, but this is easily prevented by frequent freshing over.

AGRICULTURAL ITEMS.

—The Orleans County, Vt., Agricultural Society has located its annual fair at Barton, for five years.

—Michigan shipped over 11,000,000 pounds of wool last year.

—For the past month of January the average temperature near New York city was 18°; for 10 years previous it was 31°.

—The subsoil and "pan" of the Illinois prairies, according to Dr. McCord, are very rich in all the mineral elements.

—To prevent buggy peas the Canadian farmers sow as late as will just allow time for their maturity.

—A correspondent of the *Journal of Agriculture* says that sweet oil administered to a horse troubled with bots will effect a cure.

—To remove any foreign substance from the eye, make a loop of a bristle or horse hair, and insert it under the lid and then withdraw it slowly and carefully.

—Mr. Willard estimates that 55,600,000 pounds of cheese will be sent to England from this country in the year ending with May next, or about 9,000,000 pounds more than last year. The production of cheese in this country, last year, he estimates at 215,000,000 pounds.

—Wet prairie lands have been drained of late at the West to considerable extent by Mole Drains, or those made by an implement something like a subsoil plough. The *Prairie Farmer* is informed that in some cases the water washes out the soil under the sod so as to engulph domestic animals who pass over them.

—A correspondent of the *Kansas Farmer* recommends wind mills for "the purpose of banishing those pests of the land, called 'steam mills,' which are devouring our fuel in ruinous quantities, and confiscating a fourth of our grain, and complaining that they are not making anything even at that."

—A cattle raiser and feeder of Kentucky recently remarked that he considered a thousand dollars made with cattle nearly equal to two thousand made with mules, or grain grown and sold from the farm. The great beauty in handling cattle is the condition they leave the farm in; the pasture all clean, fence-corners all dressed out, and the land becoming more fertile year by year.

—Prof. Nash says that he once knew of a water pipe being taken up that was laid for a long distance on a dead level, in which there was enough white lead found to paint a small house, inside and out, and if taken internally would kill a small army, and yet the family that used the water for twenty years was perfectly healthy. The poison settled on the bottom of the pipe and was not forced into the house.

—A correspondent of the *Prairie Farmer* says that the friction of the stocking on the foot, and not on the boot, makes the holes, and advises washing the feet at least twice a week, and scraping off the rough scurfy skin from the heel and sole. As to the one who darns, let her take the stocking and line it on the inside of the heel, or on whatever part the trouble occurs, with cotton cloth, and she will find at least three-fourths of her darning saved.

—"The trees, like giant skeletons,
Wave high their fleshless arms and bare—
Or stand like wrestlers stripped and bold,
And strongest winds to battle dare.

It seems a thing impossible
That earth its glories should repair:
That ever this bleak world again
Should bright and beauteous mantle wear."

—The *New York World* estimates the number of workmen unemployed in New York city at 50,000, in Brooklyn at 10,000, and says that the depression in New England throws out of work at least 10,000 in Maine, 20,000 in New Hampshire, 30,000 in Connecticut and Rhode Island, and 100,000 in Massachusetts. This may be a high estimate, but the number "out of work" is large in all our cities, and the prospect for the future is far from encouraging.

—Several neighboring farmers lately met in Champaign county, Ill., to compare results of their farming operations. In respect to corn raising they made an estimate based on the daily wages of men and teams, which seemed to show that at the present time, corn cannot be raised for less than fifty cents a bushel, unless over forty bushels to the acre can be obtained, which amount was considered a full average for the western part of that county.

—In commenting on the vote of the Illinois State Board of Agriculture, that no trials of speed by racing shall be allowed on the Fair grounds, next fall, the *Turf, Field and Farm* wonders where all the old fogies that compose that Board came from, and says, "We had no idea that so large a body of old women, in men's clothes, could be scraped together in the healthy, vigorous West, and especially in the enterprising Prairie State, as we find in this Board." If racing is the manly

business claimed by the above extract, why have the gentlemen of the ring so generally thrown off their old mantle and borrowed a new dress of somebody—we do not say an old woman—as they have done in substituting "Horse Fair" for the old term *Horse Race?*

—Rennets have been imported to some extent by the Herkimer County, N. Y., dairymen from Bavaria. The *Utica Herald* says they are put up without salt, and look much like a dried bladder. In fact the stomach of the calf is "blown up" like a bladder, the orifice tied, and thus while filled with air suffered to dry. These rennets, so far as we have seen, appear to be very sweet and free from taint, and they are said to be of extra quality as to strength.

The following extracts I think contain much practical wisdom. As it is many years since I saw them in print, I may not give the exact words. E. B.

Derry, N. H., Jan., 1863.

—Do not all you can; believe not all you hear; tell not all you know.

—Never worry about what you *cannot* help; never worry about what you *can* help.

—Who does the best his circumstances allow, does well; acts nobly; angels could do no more.

—Long credits, poor fences, and unruly animals cause many quarrels.

—Delay in fulfiling contracts, and want of punctuality in general, will ruin any one's credit and standing with his fellow men.

—One who uses all the natural light of day will find less occasion to use the less healthy and more expensive artificial light of lamps.

—The farmer who improves all the fair weather will find little occasion to work out of doors in storms of rain and snow.

—Borrowing tools when the borrower ought to own them; an unwillingness to make them good when injured, and neglecting to return them at the proper time, are causes of much vexation.

For the following suggestive sentences we are indebted to the head and pen of our correspondent, W. D. BROWN, of Concord, Mass.:—

—A farmer provided with a good grindstone, is apt to cut his way smoothly through the world.

—The best way to apply the whip to your team, is to give it in the shape of oats—in the crib.

—It is better to sell milk and beef, than hay or grain.

—The stomach of the swine resembles the human; therefore his need for warm, cooked food.

—Canada exported into the United States $71,576 worth of flax last year.

—A bill is now before the legislature of New Jersey to regulate the sale of vegetables by weight.

—The animal and vegetable productions of a farm are usually alike in quality and abundance. A farm is not wisely managed where both do not improve each year.

—Hospitality provides a good tie-post with chain and spring hook, where the guest may safely fasten his steed.

—A harness is stronger, and more comfortable, and lasts better, when kept soft and pliable with neat's-foot oil.

—The square form in building gives the cheapest inside room. Too many little structures are a great tax on the owner.

—The property of the country is enhanced in value by improved roads. From field to market there should be the fewest hills; no loose stones or needless sand.

In communicating the following "Items" Mr. H. Poor, of Brooklyn, N. Y., formerly of Andover, Mass., remarks, "If any one thinks I have 'wheat on the brain,' I can only express my regret that the 'fever' is not more contagious!" He adds, Maine is waking up and the other New England States should rouse themselves, as he predicts that the annual tax of some $59,000,000 will be grievously felt, if, as he fears, manufacturing is to become less prosperous. He also believes that the severe drought at the West, which prevailed during seed time, the past summer and fall, will materially reduce the crop of the coming season.

—Maine has seventy thousand farms. Three acres of wheat to each farm, at 15 bushels per acre, will give seven hundred thousands barrels of flour, allowing four and a half bushels to the barrel. Population 650,000. One barrel flour to each person would leave 50,000 barrels surplus. At $18 per barrel it has cost the State over eleven millions of dollars per annum the past two years.

—New Hampshire has about thirty-five thousand farms. Three acres of wheat to each farm, on the foregoing estimate, would give 350,000 barrels of flour. Population 350,000. Her annual tax the past two years, for flour, has been six millions.

—Vermont has about the same number of farms and the same amount of population as New Hampshire, and her annual expences for flour about the same.

—Connecticut has about twenty-six thousand farms. Population about 500,000. She would require six acres of wheat to each farm, allowing fifteen bushels per acre, and one barrel flour to each person. Her flour bills at $18 per barrel, amount to nine and a half millions dollars per annum.

—Massachusetts has thirty-six thousand farms. Population about thirteen hundred thousand. She would require nine acres to each farm. With twenty bushels to the acre, it would give fourteen hundred thousand four hundred barrels flour. This State has paid annually twenty-three millions dollars the past two years for flour.

—Rhode Island has five thousand four hundred and six farms, (average ninety-six acres each.) Population about 200,000. It would require eleven

acres to each farm, on a basis of fifteen bushels wheat, to feed her people. This State has paid about $3,600,000 per annum, the past two years for flour. Notwithstanding its general sterility, it has some good wheat lands.

EXTRACTS AND REPLIES.

TREATMENT OF AN ORCHARD.

I have taken your valuable paper for the last three years and would not do without it for twice the cost. I take two agricultural papers and pay for them both in advance. I am a farmer by occupation, and like many other farmers am not accustomed to writing; and but for your promise to make all smooth, I should not have had courage to come forward with this, my first epistle.

I have an orchard situated upon a cold piece of land with an easterly aspect which is too rough for cultivation. The trees are mostly young and grafted, but look sickly. They blossom full but do not mature but little fruit.

The land has been mowed, or rather gone over with the scythe, for the last twenty years. What can I do to the trees to make them thrifty and return me pay for labor expended? I wish to do something with them the coming season. Can I make it profitable to buy calves, at their value as veal, and raise them with but little milk, providing they have every other necessity? HENRY BELL.

South Halifax, Vt., Feb. 3, 1868.

REMARKS.—Probably your trees are simply starving to death. You say the land has been mowed, or rather gone over with a scythe, for the last twenty years. Would you expect to raise good hills of squashes, potatoes, corn, tomatoes or any other fruit or vegetables "cultivated," on the same spot for twenty years, just as you have *cultivated* your trees? Did you read an article in the FARMER of Sept. 5, 1867, about the "Best Orchard in Massachusetts?" Wouldn't such treatment make your trees shout for joy? "In the sweat of thy face shalt thou eat"—apples! Don't you remember how Mr. Pierce said he kept the ground cultivated and rich enough to raise squashes, how he fought the canker worms and caterpillars, and how he used $80 worth of mulching? If, however, you do not wish to plough up your orchard, try mulching. Coarse hay or straw, leaves and mould from the woods, or even brush, sods, muck, or good soil spread under the branches may, if your orchard is not too far gone, prove beneficial. When trees are "at home" in the woods, think how nicely they cover up their roots to protect them from the pinching frost and the burning sun, with a light and warm carpet of leaves, and then can you wonder that yours "look sickly?"

MAPLE SUGAR—TAPPING, SPOUTS, ETC.

Your correspondent, Mr. Field, of Charlemont, has written an article on sugar-making, with which I beg leave to disagree. He says, "The rough bark should never be hewed off, as this injures the tree." If there are others of this opinion I should like to hear their reasons for it. It is often necessary to remove the rough bark to prevent the spout from leaking, as well as to save it from injury from driving.

Mr. Field objects to shaving the spouts down on the top. I have used those made in that way and dislike them because they cannot be sufficiently cleaned. I scald them both before and after using them, and give them a thorough cleansing, which I find cannot be done as effectually if they are whole. Mr. Field says, "Never set more than two tubs to a tree, or more than one spout to a tub, and bore into the tree as far as the wood is white and sound." If a tree is to be bored as far as the wood is white and sound, I should recommend but one spout, and the smaller the bit the better. I have hundreds of trees in my orchard, about three hundred of which I set out thirty years ago, and their wood is white nearly through. I cut down a tree last spring about three feet through, and the wood was almost entirely white. I put only one spout into those a foot in diameter, and bore about one inch into the wood. I bore the large trees about two inches, put two tubs to a tree, and two spouts to a tub. I have learned by observation that the sap flows more freely near the bark, and that deep boring injures the tree more than the proportional gain in sap. As to boring near the ground, it will do as well for a few years, but in time it will amount to girdling the tree. I am satisfied it does not injure the tree as much to vary from one to four feet from the ground, as to have the wounds in a circle, as is the practice of some at the present time. L. M. HUNT.

Sunderland, Mass., Feb. 17, 1868.

REMARKS.—The inquiries of "A. B.," of Essex, Vt., as to the distance from the ground is it best to tap the tree, and as to the depth it is best to bore, are answered in the above communication.

BIRD HOUSES.—STARTING PLANTS EARLY.—WILL BEANS MIX?

I wish to inquire through your interesting and instructive columns whether it is best to divide a bird house into compartments, or let it be all in one? If divided, how large should the rooms be? Are Martins the most desirable kind of birds, and how get them?

Will beans mix if planted side by side?

How shall I start my plants early and not expensively? I have a window sash, can I make use of that? What kind of soil? When sow?

A CONSTANT READER.

Campello, Mass., 1868.

REMARKS.—Scarcely anything is more social than a family of martins near the dwelling. Their house should be placed upon a pole not less than fifteen feet high, and away from buildings and trees. If a pole is placed upon a roof it must be quite high, for martins seem to have an instinctive knowledge that cats can climb poles of moderate height. The rudest building, if tight, is as acceptable to them as one that is carved and gilded. God has "set them in families" as well as ourselves, and the house, therefore, should be divided into rooms. A room nine or ten inches square is none too large, as they carry in considerable material in building their nests. The hole to admit them is quite often made too small. It should be four inches high and three inches wide. Martins will amply repay your care for them by their cheerful music and the destruction of insects upon which they feed.

Beans.—We have planted a variety of beans, side by side, for many years, and have never

known them to mix, though it is the opinion of some persons that they do mix.

Early plants.—Make a hot bed in March, or scoop out turnips, fill them with rich soil and sow seeds in them. Of course they must be put in a warm place and kept properly moistened. Fill any box, one that raisins or starch or salt came in, with rich soil, thoroughly mixed with fine manure, and sow tomato or other seeds on it. Set it in the kitchen, keep it properly moistened,—not too wet, —and where it will have the sun a portion of the day. Almost any quantity of plants that a farmer may need, may be secured in this way. Thin so that they may have plenty of room, and when two inches high transplant and set still wider apart; at four or five inches high transplant again. This will cause the plants to grow stocky and strong, instead of tall and slender. If transplanted with care, even a third time, they will be all the better for it.

The best soil is a sandy loam, made rich by manure that is old and well rotted. Sow at different periods so as to have plants coming in succession; then if some fail, those coming may take their places. These are mere suggestions; practice will enable you to succeed in obtaining what you want.

HORSE RACING AT AGRICULTURAL FAIRS.

I was heartily glad when I read that the Board of Directors of the Illinois State Agricultural Society had voted to abolish horse racing at their next fair. I feel quite confident that they will be so well satisfied with the result, that they will never return to the former practice again. I wish that all other State and County Agricultural Societies would adopt a similar course. Then would our Agricultural Fairs more properly be what they purport to be; then there would be a greater gathering of farmers, mechanics and manufacturers and others, with their contributions, and an increased interest in the examination of the best specimens presented for competition, &c. How often we hear the remark made that "This horse racing is destined to run our agricultural fairs all out." To say nothing of the *cruel* and *immoral* practice, which in a less civilized age or country than the one in which we live, might not have appeared so objectionable, who does not know that the practice not only shortens the life of the horse, but renders him less serviceable for the use for which he was intended? Then why not abolish "horse racing" at *all* our Agricultural Fairs?

ELLIOT WYMAN.

East Westmoreland, N. H., Feb. 8, 1868.

RAISING AN ORCHARD FROM THE SEEDS.

I have been thinking, for some time I would write something for your valuable paper, but being of a timid nature, I feared you would not take notice enough of anything I might write to prepare it for publication. I will, however, attempt to give some account of my experience in raising an orchard.

Some twelve or fifteen years ago, I saw that something must be done or soon my neighborhood would be without orchards, for the old ones were fast going to decay, and there appeared to be no new ones taking their place. Being a young man, I thought I would try and see what I could do in raising an orchard. I got some pomace at the cider mill in the neighborhood, and after preparing my ground, sowed it. The next spring I had seedlings enough. When they were one year old I transplanted some two or three hundred, and in the fall after they were three years old I budded them with such varieties as the old orchard on the farm afforded. Two years after budding I set out twenty-five, and sold the balance to go out of the neighborhood, for my neighbors believed that my trial in orchard raising would be a failure. But by perseverance and industry I have got a nice young thrifty orchard, from which I picked more than three bushel of good marketable apples one year ago last fall Many that saw them said they had never seen such a sight before in their lives—trees so small and so full of apples. My success has had just the effect I expected—others have determined to have an orchard too. But I fear that some will be disappointed. Those who put out trees and do not take care of them, certainly will. I can tell them in advance that there is no use in trying to raise an orchard unless they make up their minds to tend the trees well and to keep the cattle out of their young orchard.

Biddeford, Me., Feb. 6, 1868. J. W.

REMARKS.—Our young friend is right about the care necessary to raise an orchard, and his experiment, we presume, will show that still greater care is necessary to keep up its productiveness. But it will pay. We hope he will find it so, and that he will let us hear from him again.

SAP SPOUTS AND CORN COBS.

With all due deference to age and experience, I would say that I do not like the directions of our venerable friend, P. Field, in FARMER of Feb. 1, for making sap spouts. Spouts made whole will clog up with ice in cold nights to such an extent that it is necessary to take the spout out of the tree and clean it. If this is not done the sap in the tree will force the spout out, whereby there will be a loss if not seen to. My method of making spouts is simply this: I take medium-sized shoots of sumach of about two years growth; cut them off nine inches long and then saw them half off, an inch from each end, but on opposite sides of the stick; then, with a sharp pointed knife split from one cut to the other; burn them out with a heated wire, chamfer them off to fit the bit, and they are finished faster than I can tell how. Two hands will make from 50 to 75 in an hour with ease. I agree with him in discarding metalic spouts, thinking they injure the color of the sugar, besides communicating an iron taste which it is impossible to remove.

I will say to "E. B." of Derry, N. H., that when I see a man advocating the use of corn cobs it reminds me of the old miller who stated that sawdust was a splendid article to fatten hogs on; but in practice, he mixed a peck of meal to half a pint of sawdust, saying "the more meal the better."

Ripton, Vt., Feb., 1868. RUSTICUS.

AMOUNT OF SEED FOR POTATOES.

In reply to your Derry correspondent "E. B." in regard to the Lady Finger potatoes—26 bushels raised from one peck, by Judge Baxter of Bellows Falls, Vt.,—the eyes, if my memory serves me, were planted four inches apart. This was "liberal" seeding in the drill. It seems that the product in corn and potatoes in "E. B.'s" experiment was larger in drills than hills. The Long Island farmers plant potatoes in drills, cutting off the small eyes, then cut into quarters, preferring three stocks to five in a cluster. "E. B." says that four butts in a hill will give the greatest product by weight, but admits that such a large quantity of seed will

give more small potatoes. The marvel would seem to be, that they are *not all small potatoes*, if by "butts," he means four potatoes with the tips cut off. If they were of the usual varieties, say, Jackson White, Orono, Mercer, or many others, four butts to the hill would give from 50 to 60 vines—enough for eight hills for a healthy, large growth. Should this excessive seeding be adopted, there would scarcely be potatoes enough for seed in New England when planting time arrives. The present price of potatoes, $5.50 per bbl. here, will necessitate great economy in seeding the coming spring. While at the East, recently, I was told by one farmer that he never raised so large a crop as last year, from simply planting the eyes. I was much gratified to learn by the statement of "E. B." that drills were most productive, and that flat hills yielded as well as those built up higher. It has been a mooted question whether hilling corn or potatoes, was not only labor lost, but actually injurious, as thousands of roots are cut off. The rains are thrown from the hills, and the necessity of hand hoeing greatly increased. H. Poor.

Brooklyn, L. I., Feb., 1868.

EARLY GOODRICH POTATOES.—OXFORD DOWN SHEEP.

Can some of the readers of your excellent paper give information whether there are two kinds of Goodrich potatoes, early and later, as there is a great deal said in favor of *Early* Goodrich potatoes? Also, can any one inform me where I can obtain Oxford Down Sheep Ewes, as they are in great reputation? An Old Farmer.

Georgia Plains, Vt., Feb. 3, 1868.

Remarks.—The Rev. Chauncey E. Goodrich, of Utica, N. Y., who died some years since, experimented extensively during the latter years of his life, in raising potatoes from the seed balls. Among the thousands which he produced—one of his best seedlings being No. 310—few comparatively proved valuable additions to our choice varieties. Among the best known of his seedlings are the Gleason, Calico, Buckeye, Prince Albert, Early June, several known only by their numbers, the Garnet, Chili, and Early Goodrich. The introduction of these varieties entitle him to the rank of a public benefactor. The word "Early" is used simply to convey the idea of early maturity of the kinds to which it is applied. We do not remember whether any other of his varieties bear his name, or not.

We do not know where the Oxford Down Sheep can be purchased, probably somewhere in Essex County, this State, as Mr. Richard S. Fay, who bred them largely, had his farm in that county.

LICE ON CATTLE.

Permit me to say that I have obtained much valuable information from reading the New England Farmer, and should hardly think of farming without it. The Extracts and Replies are particularly interesting and often instructive, although some of the ideas expressed are not in accordance with my own. For instance, "A Subscriber," at Waterbury, Vt., says that thoroughly dried *sand* sprinkled over cattle will exterminate lice. Pure sand does not, I think, trouble lice much. To keep the cattle and horses from slipping, I find that a very little sand will answer when I use sawdust, meadow mud, or loam, for an absorbent, and I always use something of the kind in sufficient quantities to take up *all* the liquid droppings, as my lean-to floor is perfectly tight. Now my remedy for lice is thoroughly dried loam, or very fine dirt, sprinkled on them occasionally from nose to tail. It is a sure *preventive*, and will in most cases clear them off, when on. If I happen to buy an animal that is quite lousy, if the dry loam does not prove effectual, I apply unguentum to the parts where the lice are the thickest, and they will soon "skedaddle,"—dead or alive, I don't care which.

Northboro', Mass., Feb. 3, 1868. C. Eames.

BURNING LAND, AND COOKING FODDER.

In the Weekly Farmer of August 10, and Monthly, 1867, page 438, is an article against "Burning, as a Means of Subduing the Rough Places," which I think would be of great benefit to very many farmers, if the suggestions there made were acted upon. But it is difficult to convince one that a course which he has long pursued is wrong; and when so convinced, it is difficult to induce him to change an old inveterate habit. I think that any one would admit that the ashes of a load of hay would be far less valuable than the same quantity converted into manure by any other process. Still people continue to burn rubbish which might easily be made into good manure, and it is frequently burnt by the roadside, where what little value the ashes may contain is lost.

The same writer, "N. S. T." gives us an excellent article on "Feeding Stock, and Cutting and Cooking Fodder," in the Weekly, of Oct. 9, and Monthly Farmer for 1867, p. 503. His views are somewhat at variance with the common opinion and common practices; but are, I think, quite consistent with common sense, and supported by sound reasoning. B. B

Derry, N. H., Feb., 1868.

"DOMESTIC ECONOMY, OR HOW TO MAKE HOME PLEASANT."

Please inform me through the Extracts and Replies columns of your valuable paper, the price of "Domestic Economy, or How to Make Home Pleasant," and you will *greatly, greatly* oblige A Lady.

North Auburn, Maine, Feb. 11, 1868.

Remarks.—The papers referred to have only appeared in our columns, as yet. They can be had in our bound Monthly (price $2.25 by mail), which also contains, besides these and other articles of interest to "Ladies," most of the agricultural matter that appears in the Weekly Farmer during the year.

GARGET IN COWS.

T. Cross, of Montpelier, Vt., will probably find his cow benefited by twenty grains of Iodide of Potash, given three times a day in her drink. One ounce makes twenty-four doses of this size. We know of no better remedy for the garget.

VALUE OF CORN COBS.

Will "E. B." of Derry, N. H., deduce any other idea of the value of corn cobs from the statistics of the State Reform School, than that published in the weekly Farmer of Nov. 23; or will he produce more reliable statistics from which we may learn their value as food for farm stock? It has long been the opinion of some good feeders that cobs were not only worthless but injurious. Bees will gather sawdust and carry it into their hives in the same manner as they do pollen. Is it a mis-

taken instinct, or is the sawdust a substitute for pollen. Because cattle will eat bones and boards, does it follow that bones and boards possess a value as food? The question is not whether a given article contains nutrition, but whether its use can be made to pay as food for our domestic animals. F.

Mast Yard, N. H., Feb. 6, 1868.

MANAGEMENT OF GEESE.

I have nine geese and seven ganders; and it seems to me that the ganders disturb one another so much that I shall not get a single gosling this year. What I wish to know is, how large a pen is necessary for each pair, and also if water enough to drink is all they need. I have two books before me, "Diseases of Animals," by Mr. Cole, which says they do well with water enough to drink; and "Country Life," by Mr. Copeland, which says they must have deep water. Information from one who knows by experience will greatly oblige a reader.

I have now 164 chickens, from the size of a quail down to those ten days old. Who beats this? I intend them for the Boston "big bugs" to eat with asparagus next May. ANSER.

Taunton, Mass., Feb. 5, 1868.

REMARKS.—Will some one who understands "Goosey Gander" by experience give our correspondent the needed information. In keeping geese we have always supposed that a "goose pond" was about as essential as a "cow pasture" in keeping cows. Indeed, Mr. Bement says the chief requisites for goose keeping are a pool of water and a pasture for grazing. The latter is essential, as the bird is graminivorous, as well as granivorous. An occasional cabbage leaf with any spare vegetable fragments will be very acceptable during the winter season. Water of such size and depth as will permit at least a daily "paddle" is essential, while a large flowing stream is apt to tempt them too far from home. The same writer says he thinks two geese sufficient for one gander, though one or two more are often allowed. For a gander and his three or four partners there should be house-room of not less than eight feet in length by six in width, with a height sufficient to allow the person who cleans it out to stand upright, with an open space beneath the eaves for ventilation. As soon as released in the morning, the geese resort to the water and then ensues the intercourse from which an increase to their numbers may be expected—"the presence of water appearing essential to the fertility of eggs."

VALUE OF CORN COBS.

I see the inquiry is made, will it pay to grind corn cobs? About fourteen years ago there was a dry summer, hay was short and the farmers had to economize everything in the shape of fodder for their stock the ensuing winter. Having a good pile of corn cobs, we added less than a bushel of grain to two of cobs, and had them ground. We had one horse then. When I built a fire in the morning, I took water boiling hot and made a mash, using about six quarts of the meal a day, being careful to have it thoroughly mixed, and fed it warm, which I think is much the best in cold weather. Fed very light with hay. That horse came out in fine condition, smooth and smart. In all cases where we have used ground feed warm, the cost has been decidedly less than when dry oats were used. We always use good English hay.

About the first of January last, I took eleven bushels of oats, about one and a half bushels of corn, and fourteen bushels of cobs, and had them ground together. I find that four quarts of oats weigh the same as five quarts of this meal. We calculate to feed the same weight of meal that we would of oats, and we expect our horses to work as well as if fed on dry oats. I wish to hear from others. That is the way I learn. R.

Troy, Vt., Feb., 1868.

BRAHMA FOWLS AND MUSCOVY DUCKS.

I send you my fowl account for the year past. Owing as I think to the wet season, of 316 chickens hatched, 189 died; of the 63 turkeys hatched, all died before they were 10 days old. The weather for ducks was good, and out of 69, I lost but 3. The eggs I sold averaged 38c per dozen, as you will see by the account.

ACCOUNT CURRENT FOR 1867.

January 1, 1867, *Stock and Cost of Food.*

12 old fowls at 75c., $9.00; 2 roosters 1.50 . . .	$10 50
26 pullets, 26 00; 16 ducks, 16.00	42 00
3 turkeys, 4.50	4 50
Bought in May	
44 hens and chickens, 26.50; 6 turkeys 3.00 . .	29 50
58 bushels corn, 76.90; 31 bushel oats 29.45 . .	106 35
20 bushels meal 25.85; 20 bushels c. corn 25.85	51 70
50 bushels fine feed 26.90; 4 bushel oat meal 4.40	31 30
314 pounds scraps 6.88; laths and nails 1.58 . . .	8 46
49 dozen & 10 hens eggs set, at 38c per doz. . .	18 93
6 dozen & 6 duck eggs set, at 40c per doz . .	2 60
Dressing poultry	4 00
	$309 84
Profit	72 93
	$382 77

January 1, 1868, *Stock and Sales, &c.*

28 old fowls, at 75c, $21.00; 2 roosters 1.50 . .	$22 50
24 pullets at 1.00, 24.00; 3 roosters, 3.00	27 00
12 ducks 12 00; 39 late chickens 19.50	31 50
Sold	
249 dozen & 9 hens eggs, average 38c per dozen	94 90
29 dozen & 1 duck eggs, 40c per doz	11 64
80 chickens 46.78; 60 ducks 60.56	107 34
9 turkeys 14.25; 36 barrels manure 37.45 . . .	51 70
5 hens 375; 6 ducks 6.00; consumed in house .	9 75
51 dozen & 2 hens eggs, at 38c, used in house .	19 44
17 dozen & 6 duck eggs at 40c per doz	7 00
	$382 77

Number of eggs laid during the year, 350 dozen and 9 hens eggs; 53 dozen and 1 duck eggs.

I have 18 chickens hatched Feb. 2d, and 15th, 9 each.

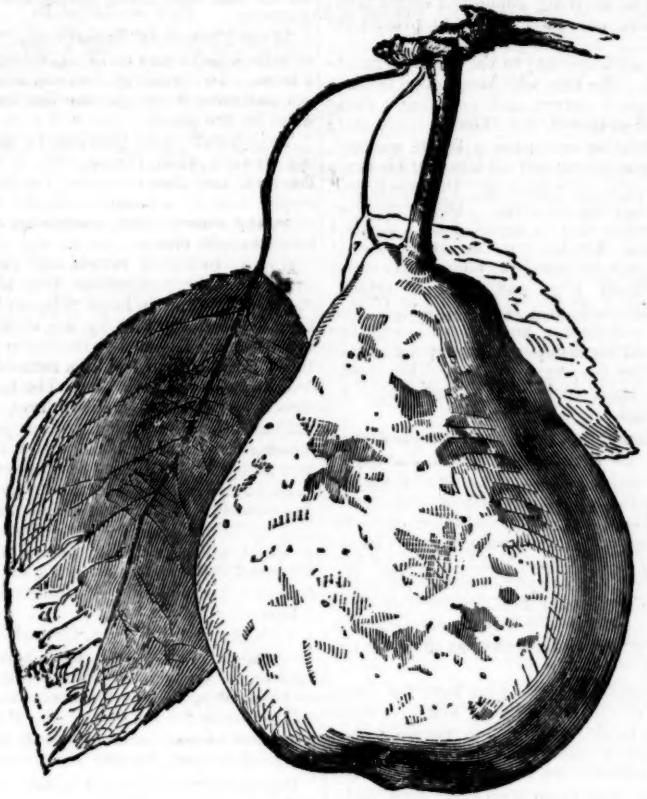
Salem, Feb. 16, 1868. JAMES BUFFINGTON.

A GOOD COW.

I have a cow that was five years old the fifteenth of last October. She calved May tenth, 1867 June fourth, sold the calf for $9.50. From that time up to the tenth of the present month, she has made 208 pounds of butter, which sold at an average of 33½ cents per pound, or $69.50. About 360 quarts of new milk were used during the time, in the family, worth seven cents per quart, or $25.20; also, milk sold, $8.50; sour milk given to swine at three cents per quart, $18. The total receipts from her in nine months are $130.59. She is coming in the first of April, and now gives five quarts of milk a day. Her keeping is common stock hay and one pint of shorts, and one pint of meal a day. She is one of the natives. H. W. M.

Concord, N. H., Feb., 1868.

REMARKS.—Did your swine "foot the bill" for sour milk at three cents per *quart?* Didn't they measure by "the gallon?"



THE NOUVEAU POITEAU PEAR.

The Hon. M. P. Wilder, of Dorchester, Mass., has been very successful in the cultivation of pears, both on quince and on their own stocks. Our cut represents a specimen of a foreign variety raised on his grounds, which, though prolific, large and "very good," has not fully sustained the high expectations which were excited by its early promise. As different varieties of pears require different soils, and as this difference is not well understood, even by experienced pomologists, it is well for those who propose to set out trees to ascertain what kinds do best in their respective neighborhoods, and on soils and in locations similar to those in which they propose to place them. In the vicinity of Boston pears have been as easily raised for several years past as apples, and we believe their cultivation should become more general throughout the southern part of New England.

For the New England Farmer.

FENCES AND FENCING.

As it is rather seldom that I see in print any thing about fencing, I thought I would say a few words on this subject. Fencing is one of the first and most important matters upon the farm. Our lands may be rich, and our cultivation careful and laborious, but if we have not good fences to protect our crops, these avail but little. The truth of this is seen, in

some instances, in the utter annihilation of our crops. As a general rule, we do not see thrift and order in anything connected with a farm, unless there are good fences to protect the crops.

Fences are important to the peace of neighborhoods. The man who keeps good fence is usually a good citizen and neighbor. Some farmers act as though they thought every day's work in building or repairing fences was lost. I go to my neighbor and tell him that his fence is down and needs repairing. Perhaps he will say, "Well, I will fix it up." But he procrastinates, and it is not attended to. Again I remind him that his poor fence exposes my crops. Again he promises, but the job is not done. Finally I go and repair it myself. Now, do not such men lack a principle that holds the community and the world together in peace and friendship. Some depend largely on dogs for fencing purposes. This almost invariably leads to trouble,—hard words or hard feelings.

I have found that posts cut from the first of December to the first of March, last better than those cut at any other season of the year. I have put the top end in the ground sometimes, but find, as the top end is the smallest, it will rot off quicker. I want my posts large. If in a clay soil, they need to be put three feet deep, and the dirt tamped in hard, so that the post will be as solid as if it grew there. If in sandy or gravelly land, two or two and a half feet is as good as more, as they will not heave out.

Of late years, I have cut my logs for fence from ten to eleven feet long, and have them sawed into boards from nine to twelve inches wide. I set a post at each length of boards, without a middle post, so that, if any of the posts heave out, there is no harm done to the boards. Where boards are 16 to 18 feet long, you must have a middle post which breaks or splits the boards in case it is raised more than the posts at the ends of the boards. Lumber is growing scarce, and soon we shall have to resort to stone for fence. Stone wall is the most permanent and durable of any fence, and the cheapest in the end. But it is quite a trade to take large stone and put them into a good wall.

I look around to see the young men who are learning this trade, and though I regard it as a matter of much importance to be able to manage the large boulders that lie in our fields, there are none in my neighborhood who are serving the necessary apprenticeship.

On my own farm, I take care to divide all the outside fences with my neighboring abutters, and to have such division properly recorded. This makes it a permanent thing, and I am not troubled by any change of ownership that may take place in the adjoining farms.

O. FOSTER.

Tunbridge, Vt., Jan., 1868.

For the New England Farmer.

THAT MORTGAGE ON THE FARM.

How we Lifted It.

In the FARMER of January 25, "C. B. E." calls for experiences on lifting mortgages from a farm. To encourage him and others in like circumstances I attempt, for the first time, to write for the press.

Twenty-five years previous to my purchasing the farm which I now own, I worked at the boot and shoe business; but being out of employment for a longer or shorter time every year, the wheels would sometimes roll backwards in spite of me.

Hoping to better myself and get my boys away from the temptations that always surround the young in large villages, I began to look for a farm; and by the direction of a kind Providence, came to Dudley in February, 1855, and bought at auction a farm of one hundred and ten acres for $3000. The 1st of March moved on with wife and two boys, one in his sixth and the other in his seventh year. For farming tools, I had a wheelbarrow, shovel and hoe, and $800 in cash to pay for farm, stock, tools, horse, carriages, harnesses and hay. I also owned one hundred acres of uncultivated land in Illinois, which a few years before cost me $350, which I sold and received the pay for it in small driblets, so that at the expiration of six years, I was in debt over thirteen hundred dollars.

To begin with, I bought, for cash, a yoke of five-year-old oxen of good size, a horse, wagon, harness, ox cart and a few other implements of husbandry, leaving but about five hundred dollars to pay for the farm. For the balance, I borrowed money and gave two mortgages. It was all borrow, borrow, and get trusted.

Began with two cows for a dairy, two pigs, and a few hens. The first year was a hard tug, I assure you. Things looked not only dark but *black* sometimes. But we put our trust in God, worked hard and took a long look ahead. Our crops came in well, sold all we could, and by the time winter came, had our large cellar literally crammed with provisions and vegetables.

The first winter we milked three farrow cows, gave them plenty of carrots, made butter all winter, which sold readily, and as we thought, at a great price, thirty cents per pound. This was a great help.

We have increased our stock from year to year, now generally numbering eight cows, from which we make butter, except in the very heat of summer we make new-milk cheese,—rarely making both at the same time. I sell but very little grain and no hay from the farm. Sell some pork, beef, apples, butter, cheese and vegetables, and have sold yearly, perhaps fifteen cords of wood, of which there is about forty acres on the farm—not very heavy, but young and thrifty.

Since purchasing the farm I have raised the

barn, turning it one-quarter round, and putting a cellar under it; moved a shed back its width; built a henery, and a milk and cheese room, 12 by 25 feet; raised the roof of wood room half story, and have a carpenter's and shoemaker's shop over it; have shingled all my buildings, using more than fifty thousand shingles; and this year have repaired, improved and painted the house. Many improvements have been made on the farm, such as ditching, digging rocks, laying new stone wall, and resetting old walls; setting out fruit trees nearly every year; improving mowing land, so that I now cut at least one-third more hay than at first.

My stock now numbers fifteen head, mostly full grown. In contrast with those I began with, my farming tools now consist in part, of a mowing machine, bought seven years ago; horse wheel rake; ox wagon, carts, and all other necessary implements of husbandry, on farm and in the house, as I had much rather lend than borrow.

Our two sons, now in their nineteenth and twentieth years, have attended school at the academy, one and sometimes both, nearly every term for the last three years, except while teaching last winter and this, and yet have worked out enough to pay for all extra help we have had besides doing our own farm work.

All these things have been done and all mortgages were cleared off two years ago, and besides we have always had something to spare for benevolent purposes. But in order to do all this, it has required unremitting toil and great economy in doors as well as out. Our motto in respect to food is, an abundance, healthy, and well cooked; as to dress, that which is comfortable, substantial and respectable; a large share of it being made up in the family.

Now if "C. B. E.," or any other "live young man" with a *suitable* helpmeet will do these things, they can lift almost any amount of mortgage from the farm, and at the same time live more independently than almost any other class of people around them. C. E. K.

Dudley, Mass., Feb. 1, 1868.

REMARKS.—"J. D.," of Weathersfield, Vt., who belongs to the class of "indebted young farmers," and who seconded the request of "C. B. E." in a note which has not been published, will see that "C. E. K." has anticipated his request to "tell us how to pay for our farms without denying ourselves the comforts of life, and without foregoing the higher privilege of doing something to make society and our neighbors better and happier."

We have another response to the appeal of "C. B. E.," which will soon be published. The writer was brought up on a farm in England, and his illustrations of How to do It, and How not to do It, are drawn from English experience, and will, therefore, be doubly interesting to American readers.

THE CASTOR BEAN.

The culture of the castor bean is much like that of corn, being regarded by many as less laborious and expensive. Good corn land is suited to the castor bean. If not fertile, it should be heavily manured, as the plants are great feeders. The ploughing and dragging should be done in the most efficient manner. Plant when the frost is well passed and the ground has become warm. The hills should be at least four feet apart each way. Some cultivators prefer seven feet. One plant to the hill is enough, but several seeds should be planted to guard against accident. Sometimes a space is left once in four rows wide enough to admit a farm wagon, so as to facilitate harvesting the crop. The ground should be cultivated several times, that the plants may attain a vigorous growth. Scarcely any crop pays better for thorough cultivation than this. Twenty bushels per acre, is a full average yield. The market price is variable. During the past winter the beans in the St. Louis market have ranged from $3.90 to $1.25 per bushel. As the cost of growing does not differ materially from that of corn, the approximate profits can be calculated. At the present depressed condition of the market, an acre of beans would yield about $25, leaving but little margin for profit. The oil is quoted at $2.10 to $2.25 per gallon. As the yield of oil is about 68 gallons per acre, the manufactured oil would amount to about $150 per acre. This gives $4 to the manufacturer to $1 to the producer, a division which cannot be regarded as equitable. Formerly the castor bean was largely cultivated in the southern counties of Illinois, but had become unprofitable previous to the rebellion. This event, causing an advance in price of two hundred to four hundred per cent., revived its culture from almost nothing in 1860, to many thousand bushels in 1864. St. Louis is the great market for the crop, more oil being manufactured there than at any other point in the country. The receipts at St. Louis from all sources during the last year, exceeded 50,000 bushels.—*Prairie Farmer.*

—In an article in the *Iowa Homestead* urging the importance of tree planting, the writer, the Hon. J. B. Grinnell, says: "In our climate fuel costs the prairie farmer more than his bread. I have made personal observation in from sixty to one hundred counties, and examined in the official field notes of Iowa, to arrive at the conclusion that but one in ten of our counties has a sufficiency of timber, and even these are losing rather than increasing their supply."

Ladies' Department.

From Chambers' Journal.

GRANDFATHER'S PET.

This is the room where she slept,
Only a year ago—
Quiet and carefully swept,
Blinds and curtains like snow.
There, by the bed in the dusky gloom,
She would kneel with her tiny clasped hands, and pray!
Here is the little white rose of a room,
With the fragrance fled away!

Nelly, grandfather's pet,
With her wise little face,—
I seem to hear her yet
Singing about the place;
But the crowds roll on, and the streets are drear,
And the world seems hard with a bitter doom,
And Nelly is singing elsewhere,—and here
Is the little white rose of a room.

Why, if she stood just there,
As she used to do,
With her long, light yellow hair,
And her eyes of blue,—
If she stood, I say, at the edge of the bed,
And ran to my side with a living touch,
Though I know she is quiet, and buried and dead,
I should not wonder much;

For she was so young, you know,—
Only seven years old;
And she loved me, loved me, so,
Though I was gray and old;
And her face was so wise, so sweet to see,
And it still looked living when she lay dead,
And she used to plead for mother and me,
By the side of that very bed!

I wonder, now, if she
Knows I am standing here,
Feeling, wherever she be,
We hold the place so dear?
It cannot be that she sleeps too sound,
Still in her nightgown drest,
Not to hear my footsteps sound
In the room where she used to rest.

I have felt hard fortune's stings,
And battled in doubt and strife,
And never thought much of things
Beyond the human life;
But I cannot think that my darling died
Like great strong men, with their prayers untrue—
Nay! rather she sits at God's own side,
And sings as she used to do!

DOMESTIC ECONOMY;

OR,

HOW TO MAKE HOME PLEASANT.

BY ANNE G. HALE.

[Entered according to Act of Congress, in the year 1856, by R. P. Eaton & Co., in the Clerk's Office of the District Court for the District of Massachusetts.]

CHAPTER IX.

CHILDREN'S CLOTHING.

"An' sure it's not *sich* a price as ye'll be askthin' for the thrifle, nor meself wud be wullin' to't, at all, at all—"

"But the rid gowld jist here in me hand to pay for't, mem," sputtered the pertinacious customers. who, in the shape of two Irish girls, one to choose, the other to buy, had tried the patience of a young shopwoman to its utmost, in tumbling and fumbling over her choicest embroideries of muslin and cambric.

"I can take no less; the trimming is well worth that," was her quiet reply.

"Casting pearls before swine," she thought, as in answer to their first inquiry she had timidly opened this box of daintiest array; and it went to her heart to see how the delicate things shrank and shrivelled like sensitive plants at their rude touch, wilting and falling from the hot moist hands that roughly tested their beauty and their strength,—"jist to thry if they'll stahn' washin', mem." Still, as shopwomen must, she bore it in silence, only a shiver and a sigh escaping unwittingly as she named the price, her eye glancing over the tattered and soiled raiment of the questioners, rather suspiciously, it must be confessed, for both seemed in greater need of comfortable and clean clothing than of anything ornamental.

There was then more smoothing and pulling of the muslin, and a closer scrutiny of its fanciful device, accompanied by audible whispering of outlandish jargon ending in the remonstrance recorded above. But the shop-woman was inflexible. Nora and Bridget exhausted all their logic and had begun to use a little "blarney;" all the while stretching over their red hands and grimy wrists the piece of goods, which had had the good, or the ill fortune to please them, when the shrill shriek of a steam-whistle and the hasty peal of a bell put a stop to their chaffering. The last train was on the point of leaving, and twenty miles of railroad between them and "Mairy and her babby," for whose christening-robe the embroidery was to be bought, decided the question at once.

The "rid gowld," thrown upon the counter, went gleefully singing and dancing towards its new mistress, glad to escape from the greasy sheepskin purse which had been its prison since it left the banks of the blue Shannon many months previous. But the hasty tearing of the muslin, separating sister

"buds, and leaves, and sprigs,
And curling tendrils, gracefully disposed,"

gave forth a shrill, sharp sound, their parting farewell, dismal as the cry of a banshee. Alas, alas for human hopes! Was it, indeed, that prophetic wail? The christening dress of "Mairy's babby" before the week came round served for poor Mary's shroud.

It is the old, old story of a mother's self-sacrificing love: during all the cold weather she had been poorly clad, and denied herself needful food, in order to provide this finery for her infant. The little woman over the way, who always wore soft clothing and lived daintily, had worked herself almost to a skeleton to make an outfit for her firstborn; and why shouldn't she, in her small way, do what she could to beautify and adorn her darling, she asked herself a hundred times during those cold, hungry dismal days.

They were both actuated by the same morbid sentiment which, had Irish Mary been spared long enough, would have shown itself in splitting the wood and bringing the water to cook her son a nice dinner and to "do up" his linen, while he loafed at street corners, or spent in bar-rooms, or gambled away, all that he could coax or steal from the little hoard which her self-denial counted over and slowly increased against "his setting up for himself."

And in her Yankee neighbor it will take form in dressing her boy in all the foolish frippery of a precocious dandy, and in indulging him in sweetmeats and amusements, which will gradually merge into the flash and bluster of "a gentleman of the ring;" oyster suppers and champagne, billiards and fast horses; till by-and-by there is a defalcation, and the motley garb of the prison, its hard fare, and its irksome toil become the young man's portion; while in the shame and silence of her desolated home, the mother weeps bitter tears over those pretty garments of his long-lost innocence, the first out-growth of her mistaken fondness.

When will mothers learn how much the habits of their children's maturer years depend upon early impressions? A single folly thoughtlessly indulged may turn the current of a whole life. One false notion exemplified in her conduct may counteract all her teachings to the contrary. As soon as her child's eyes can catch the love-light in her own, his plastic mind is ready to receive the stamp of her tastes, of her aspirations, of her hopes, which she manifests involuntarily in mien and manner; in the tones of her voice; in the choice of her recreations, of her associates, of the colors and arrangement of her dress; no less than in display of affection for him, or her studied neglect; in the playthings and sports by which she intends to develop and educate his capacities, or in the dress and the trinkets which she selects to adorn his person.

Do not make your children images of vanity and frivolity by loading them with gewgaws and finery; nor foster their pride by making their clothing or their appearance of the first importance. Awaken in their hearts as early as possible a love for simple and ordinary things. Teach them to distinguish the real and the good, and to be content with these; so that they shall not be blinded, nor dazzled by the glitter and the glare, which, hiding hollowness and insincerity, lure so many to destruction. Let them see that beauty depends not on form nor color, but on propriety; on its fitness and agreement with everything that is good and gentle; or that can arouse high and pure thoughts, that can lead to generous and noble action; that nothing is worthy of admiration that makes them haughty, or envious, or covetous, or jealous—in one word, selfish. Help them to realize that self-forgetfulness, self-renunciation, is the highest virtue; and, therefore, the greatest beauty. For beauty is of the mind and the heart more than of the person, and increased with every act of self-denial, with every thought for the welfare of others; and delights in simplicity, and meekness, and gentleness.

And this is all materially hindered or helped by the way in which they are led to regard dress. Clothing, especially with children, has great significance in the relation which it bears to these matters of daily life. See, then, that they are comfortably and neatly clad; that no great nicety of material or excess of ornament, neither any ill-fitting or shabby garment, be a trouble or a danger to them, either physically or morally.

In making the clothing of children, aim especially to give them freedom of motion and gracefulness of position; while closely adapted to the form there should be no tightness nor constraint upon any joint or muscle. At the same time, no part of the body should be unduly exposed. Many a mother, if she be not answerable for the early death of her child, has laid the foundation for years of suffering, by dressing it in such a manner that neck, arms, and other parts of the body have no protection against cold and dampness even in the most inclement weather. Fond of displaying what she considers its beauty, she excuses her foolish pride by pretending that this is the way to harden and strengthen the child,—about as sensible a process to accomplish this as would be the giving of a daily dose of poison in order to prepare the system for its accidental use at some future time.

Keep your children always clad warmly enough; don't be afraid of making them delicate by this means; it is easier to ward off a cold or a fever than to cure one, and health is more likely to be made delicate by frequent attacks of disease than by precaution against its approach.

In the winter season, be sure that their feet are always warm and dry. Make for infants the softest of socks, knit or crocheted loosely of the warmest worsteds. Any mother who can handle knitting or chrochet needles can quickly provide these, needing no guide but the tiny foot they are to fit. Or, with bits of thibet and flannel she will like to exercise her ingenuity in forming a miniature shoe, that shall be warmly wadded, and prettily bound and buttoned about the chubby ankle.

For larger children make good stout stockings; by the time they are seven years old they ought to be taught to knit these themselves. Make them of the best yarn you can get; for children keep their feet in such constant motion that the thickest stockings soon wear out. Line the heels and toes, and also cover them, if you find they are getting thin before the rest of the stocking-foot gives out; when these are worn through renew them. When the instep breaks through, and there is a general thinness and falling away, cut off the foot above all weak places and knit it again of new yarn. If the stocking be shrunken or out-

grown, take up the edge of the top and knit the desired length, finishing the edge by knitting each stitch with its next until all are gone, as in binding a heel—it must be done very loosely.

Good stockings for children may be made by cutting over those that are too much worn to be of use to grown persons. Cut them according to the directions for such work given in the chapter upon women's apparel,—after fitting them to the ankle and stitching on the wrong side.

The color of children's stockings should in some measure correspond with the color of their dress. Many persons may agree with aunt Hoskins, in the story of Leslie Goldthwaite, who believed in "white stockin's, or go athout. Bilin' an' bleachin', an' comin' out new, none o' your aggravations 'v everlastin' dirt-color." But for boys who frequently go through all the mud and wet that they can, so that their boots and shoes get saturated and stain their stockings, drab is certainly more desirable than white; while even for the common wear of girls, except with light-colored dresses, most mothers will choose the more delicate shades of drab and slate. With the little ones they will allow all the brightness and whiteness that they have time and means to afford.

As to shoes, the very word has an appalling sound; it is so difficult to find anything in the name of boot or shoe that is not constantly getting trodden down at heel—screwed at one side—burst at the edge of the sole—stubbed at the toe,—or kicked, or scuffed, or knocked into pieces generally. If it is a bootee, gores are torn or stretched out, eyelets or buttonholes broken down, lacings lost or knotted, buttons gone and the tongue pulled out; the sole is scrubbed through to the quick, and the upper leather gets rough and brown; and all this in an incredibly short space of time. I believe some parents would willingly put up with the noisy clamping and clatter of the wooden *sabots* worn by the French and Swiss peasants for the sake of their durability.

There did seem some prospect of a slight relief from a portion of this trial by the introduction of copper toes and iron heels. But after their novelty was over, the youngsters began to think it was too much like punishing them for misdemeanors beforehand, and most of them now demur at their use;—perhaps the silver-tips may have a more permanent charm for them.

No doubt boots and shoes would last much longer if children were taught how to wear them; that is, the proper way of placing the foot when standing and when walking. Not one in twenty supports the weight of the body by setting the heel squarely and firmly. And so not only are boots and shoes trodden out of shape, but an awkward gait is acquired, and the person's figure gets askew and awry. Then, too, the little matters of lacings and buttons and straps should always be kept in order, and straightly adjusted; and linings and heel-stiffenings tidy, and in their proper places; all of which need a mother's watchful eye, and, many times, all the ingenuity and skill of her tireless hands.

The use of rubber boots for extremely wet weather or for deep snows, at first thought, seems necessary; but young rogues—girls as much as boys—do so love to go to the extent of daring when protected by them, not unfrequently *accidentally* toppling over into danger, that I sometimes think they are better off without them. Nevertheless, they are a good protection from dampness; yet their constant use is deleterious to health, they are so completely air-tight as well as water-proof. Rubber shoes over good leather boots are on this account much to be preferred.

All children when old enough to wear out-of-door boots and shoes should keep such boots and shoes expressly for that purpose, changing them for slippers as soon as they enter the house. Directions for making house shoes and slippers have been given in previous chapters; they should be taught to embroider these in simple patterns with worsteds or braid; some children take great pleasure in such work.

Moccasins, or Polish boots, are very good to wear over the walking shoes or bootees of girls, in cold and snowy weather. Knit them of coarse yarn, following the shape of a laced boot. The sole should be of felt, to which the knit boot is strongly stitched; copy the form of this sole from that of the leather boot, making it a size larger. Then cut a pattern of the upper leather of the boot, and begin to knit your yarn one by casting stitches enough to go around the edge of the felt sole. Knit it in seams or ribs, and narrow it to the right shape through the centre of the foot over the instep. Be careful not to narrow it so much as to get the ankle small. Knit them nearly to the knee; but for the last six inches take the stitches all on one needle and knit it open, the whole width, as a heel is knit; thus, like an unlaced boot, the moccasin is more easily put on and off. When within half an inch of closing off, which is done as when stockings are lengthened—treated of above—make a row of holes half an inch apart, by knitting two stitches together and looping the yarn over the needle at the same time. Through these holes lace a stout woolen cord—twist it of the yarn—to draw the boot up and to keep it in place.

Woolen buskins are very warm, and not so burdensome as these boots. Knit these also of coarse yarn. Begin at the top and knit it ribbed, and as if for the leg of a stocking. When the ankle is finished, instead of setting the heel, in its place close off one-third of the stitches, and knit the rest backward and forward, in the style of a heel, for an instep. Close off this instep when it reaches to where the foot begins to taper. Cut rubber or leather straps about an inch wide, and stitch them to the ankle to pass over the heel, and to the sides of the instep, in the middle of its length, to go around the foot.

In this variable climate of ours, children who go out-doors need woolen under-waists and drawers during seven or eight months of the year. Make them of soft flannel or yarn, for small children crochet or knit them of split-zephyr worsted. It requires no great ingenuity to form them, only be sure that they are large enough to allow for shrinking, a great deal for those who perspire freely. The drawers should reach to the stockings and be fastened to them with buttons; proper holes for which should be knit or wrought in the stocking-top. The waist and the drawers should be buttoned together at the belt. Be sure that neither fit tightly in any place, or draw uncomfortably from any movement of the wearer; sometimes the union of two portions of cloth cut from different ways of the web causes this. The waist should cover the neck well; for the coldest weather the sleeves should reach to the wrist,—for milder only three or four inches below the shoulder. In summer, substitute cotton for the flannel drawers, and in making these garments always cut the cloth, whether cotton or flannel, lengthwise of the web.

The under-linen of children should be made in the easiest and plainest manner possible, of a gored or sack form gathered into a narrow yoke that lies lightly upon the shoulders; the sleeves short, and just full enough to admit of putting on and off quickly. It should be finished with a neat hem, and have no ornament save a narrow edging around the sleeves and yoke; a very narrow cambric frill, or Smyrna lace or its imitation in crochet or tatting, is very good for this purpose: button-hole work in scallops, or braid embroidery, or laid-work, or cut-work, besides being uncomfortable where it comes in contact with the skin, is difficult to keep as clearly white as the rest of the garment without scrubbing it so hard in washing as to injure the fabric. Night-gowns, also, should have no stiff, hard trimming to annoy and fret them; they should be long and loose, gathered into a yoke that fits easily to the neck from the throat to over the shoulders, or merely drawn by means of a hem and tape closely about the throat. The best sleeping garments for children are long, loose trowsers reaching from the throat, where they are snugly drawn and tied, to the ankle, and there gathered into a band. They should have full sleeves gathered into narrow wristbands. Buy unbleached cotton for these garments and bleach it yourself, according to the rule given in Chap. VI. Some prefer cotton flannel for winter wear, especially for night-gowns. Others say that cotton flannel is unhealthy, that it prevents the free passage of insensible perspiration.

The linen or linen-cambric or muslin undergarments of infants should be merely a width of the material, to cover the waist; the cutting out of the arm-size made to form a narrow shoulder-band; and the garments left open behind, or closed at the sides, according to fancy. These should have the least possible trimming, nothing more than a row of fagot-stitch at the hems.

Infants' blankets and all children's flannel skirts should be white; a nice wide hem neatly stitched is sufficient border. If you embroider them, those that are in common use and need frequent washing should not be done in silk; the white of silk being a dye, the only white dye known, (so says the *Scientific American*) is soon washed out, and you have the original dingy yellow of the floss; nice worsteds or worsted braid make pretty embroidery.

A simple embroidery for the edge of hems or any seams in flannel, is the brier-vine, done with worsted or coarse silk: begin at the left hand end of the seam—take your needle through from the wrong side— lay the thread in a slanting direction *towards your right hand*—take up three or four threads of the flannel with your needle, as if to stitch it, above the thread, which is kept in place by the left thumb; make three or four stitches in this way—keeping the thread in its position by them—then turn the thread *from your right* for the next three or four stitches; this forms a point, with the briers facing all one way. Holding the thread more or less inclined makes these points or waves of the vine more or less sharp. Two stitches, or even one on each side of the point, make a narrower, and for small seams, a prettier border.

When flannels become thin in those portions that receive the most wear, line them with half-worn pieces of the same material; if holes appear they may be darned with fine worsted to these pieces so neatly as to escape observation. When skirts are getting thin at the hem, reverse them, and take the belt edge for the hem,—if the edge of the hem be very much worn, cut it off and take it for a facing to this new edge. By this management the garment will look well and be comfortable a long time.

White cambric and brilliant are the best fabrics for infants' dresses; after these the same goods or calico of the tiniest designs in the most delicate colors. Don't make them too long, nor too full,—seven-eighths or three quarters of a yard is long enough for common wear, a yard and a half wide enough. Give this skirt a hem two inches deep and gather it into a loose, narrow belt. For some dresses this belt may be of insertion, between which and a lining, a narrow ribbon of some delicate and becoming color may be drawn as a waist fastening. Avoid all fanciful styles of waist and sleeves. The easiest and the prettiest waist is of moderate fullness—three to three and one half inches long—gathered to the belt, and, again, to a narrow band that lies loosely about the neck just at the shoulders; the band plain and drawn a little snugly with a small tape,—or of insertion, with ribbon, as at the belt. Cut a wide, easy arm size. Make the sleeve of a straight band, about an inch and a half wide, with a neat, very narrow hem and edging. It should just fit the arm-size.

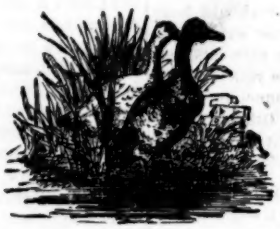
But a full sleeve gathered into a band with ribbon, like the neck of the dress, is much prettier and will last much longer. Have no buttons, nor hooks, nor pins, to fasten infants' clothing—use tape or ribbon for this purpose.

Bibs and short tiers any mother can make out of small pieces of cambric or brilliant, binding them with very narrow strips of pretty lawn or muslin, or setting around the edge a row of tatting or crochet in cotton. These save much washing and ironing of dresses, as well as much wear. But a baby four months old, or even younger, should be supplied with long-sleeved tiers drawn high about the neck; made of gingham or calico; full enough to cover the dress well—hanging loosely around it and being fastened at the belt, behind, also at the neck. These tiers are such a saving to the clothes of children, that all should be furnished with them, to wear about their play within doors, till they are twelve years old. And girls should wear them several years longer, when assisting in housework. The skirts of calico and gingham dresses that are outgrown can be used to make these tiers, though of course new goods will last much longer.

A baby needs a small woolen sack to wear over its low-necked and short sleeved cambric dress in cold weather. To make this, take one-third of a yard of flannel, of some pretty color, and fold its two selvages in a crosswise manner to the centre, forming a double point; the selvages lying upon one cut edge of the flannel, the other edge being the front opening of the sack. From the centre, which makes the top of the point, cut a small semi-circular piece,—thus forming the neck-hole. The crosswise folds fit the slope of the shoulders and are the centre of the sleeves, which are formed by cutting the flannel parallel with those folds, at a proper distance from them to make the sleeves sufficiently wide; for the length of the sleeve extend these cuttings to within two inches of the arm size, and finish it at the hand according to your taste. To shape the body of the sack, cut out gores under the arm, and then stitch a seam there; also stitch up the sleeves. Cut the corners of the front to a circular shape, and then pink the edge of the sack or cut it in small scallops. A yarn or worsted sack may be knit or crocheted of the same shape.

For the winter dresses of a babe that is old enough to dispense with a wrapping blanket, use nice flannel or thibet or all-wool delaine. Plain is prettiest, though they are often printed in small, neat designs. Don't get gaudy colors or showy figures; and make the dresses large enough to last two seasons. A good way to make these woolen dresses is to have the waist only a continuation of the skirt, arranging the fabric in plaits at the belt, which are stitched in their folds to a lining that fits the waist smoothly yet loosely. Cut the sleeves as for cambric dresses, and bind both them and the neck with silk or velvet.

A long, loose sack, lined and lightly wadded, to be used as a morning wrapper or dressing-gown is a very convenient garment, not only for babies but for all children. Its advantage for warding off colds and chills in a half-warmed room should not be overlooked, nor yet its economy in saving much hard usage of better dresses. It can be made at very little expense—by taking two or three breadths of the skirt of your old thibet or delaine dress and using as much taste and ingenuity in fabricating it as you would in making a man's lounging coat.

A baby's outside garment should be of the most delicate flannel; or else of thibet, lyonese cloth or all-wool delaine of a quiet color; made double, of the same material, or lined with soft, colored cambric of the same shade as the outside. Cut and make it in the fashion of a woman's water-proof circular, with a hood attached, having also a cape to wear with it when much exposed to cold.

[This subject will be further considered in a subsequent chapter. The next chapter which will appear in our May number of the Monthly FARMER, will treat of Woman's Out-door Work, Gardening, &c.]